

The PHOTO LITHOGRAPHER

MAR. • 1939
VOL. 7 • NO. 3



➡ PUBLISHED IN THE INTERESTS
OF LITHOGRAPHERS EVERYWHERE

Primrose Chrome 137P
 Lemon Chrome 131P
 Medium Chrome 138P
 Fast Yellow Lake 1293P
 Fast Yellow 870P
 Process Yellow 457FP
 Process Yellow 468FP
 Permanent Yellow Lake 6P-2
 Permanent Process Yellow 2824P
 Fast Yellow Toner 904P
 Permanent Yellow Toner 6P
 Chrome Orange Light 213P
 Chrome Orange Dark 214P
 Persian Orange 2202F
 Fast Orange Lake 137P-2
 Fast Orange 77P
 Fast Reddish Orange 47P
 Fast Orange 247P
 Fast Orange Toner 137P
 Permanent Flesh Lake 245P-2
 Permanent Pink Lake 246P-2
 Permanent Rose Lake 3044P-2
 Permanent Cerise Lake 2642P-2
 Permanent Flesh Toner 245P
 Permanent Pink Toner 246P
 Permanent Rose Toner 3044P
 Permanent Cerise Toner 2642P
 Permanent Fire Red 1143P
 Carnation Red 1311P
 Vermillion 3281FP
 Process Red 459FP
 Sun Red 226P
 Brilliant Red Yellowish 222FP
 Brilliant Red Light 223FP
 Brilliant Red Medium 224FP
 Brilliant Red Dark 225FP
 Permanent Red 786P
 Permanent Geranium Extra P
 Para Toner Dark 212P
 Process Red 2838FP
 Toluidine Toner 210P
 Madder Lake Extra P
 Fast Red 207P
 Fast Red Toner 229P
 Coral Red 1327P
 Rubine Toner 687P
 Permanent Process Red 702P
 Permanent Magenta 28P
 Permanent Maroon Toner 1112P
 Fast Brown 1536P
 Fast Brown 1526P
 Sepia Brown 2670P
 Photo Brown 2731P
 Milori Blue 1090P
 Bronze Blue 8337P
 Milori Blue 8357P
 Dark Bronze Blue 2433FP
 Brilliant Cerulean Blue 902F
 Permanent Sky Blue Lake 2836P-2
 Permanent Oriental Blue Lake 135P-2
 Permanent Peacock Blue Lake 2667P-2
 Fast Blue 282P
 Permanent Cerulean Blue 823P
 Permanent Process Blue 629P
 Permanent Oriental Blue 61FP
 Oriental Blue 604FP
 Permanent Cerulean Blue 341P
 Permanent Cerulean Blue 433P
 Permanent Brilliant Blue 216P
 Permanent Marine Blue 58FP
 Brilliant Blue Toner 884P
 Permanent Sky Blue Toner 2836P
 Permanent Blue Toner VP
 Permanent Oriental Blue Toner 135P
 Permanent Peacock Blue Toner 2667P
 Permanent Violet Lake 2635P-2
 Permanent Purple 419P
 Permanent Purple 62P
 Permanent Royal Purple Lake 247P-2
 Permanent Violet Toner 2635P
 Permanent Purple Toner 215P
 Permanent Royal Purple Toner 247P
 Chrome Green Light 218P
 Chrome Green Dark 220P
 Permanent Bronze Green Lake 2628P-2
 Permanent Brilliant Green Lake 248P-2
 Fast Emerald Green 130P
 Permanent Bluish Green 33P
 Permanent Bronze Green Toner 2628P
 Permanent Brilliant Green Toner 248P
 Job Black 347
 Process Black 464
 Halftone Black 1344
 Halftone Black 465
 Commercial Black 330
 Brilliant Blue Black 331
 Black Crayon Ink
 Laketime
 Transparent White 701
 Reducing White 521
 Magnesia White
 Gloss White 766
 Cover White 376
 Opaque White 1364
 Paste Drier
 Cobalt Paste Drier 2802
 Kalinin Drier
 Bronze Powder Richgold or Palegold
 Gold Size 2176
 Antitack
 Reducing Varnish No. 0

*Here's a
line of inks
you can
count on!*

SENELITH INKS

Whatever the ink problem confronting the busy lithographic plant, the chances are that one or more of the selective Senelith Inks will overcome the difficulty.

More and more, lithographers are realizing that standardizing on Senelith Inks is an important factor in maintaining their standards for quality production which is naturally reflected in more harmonious relations with their customers.

As pioneers in the promoting of practical and helpful suggestions for the elimination of offset ink troubles, we have available to interested parties our booklet "INKS, Lithographic and Printing." It is yours for the asking.

Permanent Cerulean Blue 823P

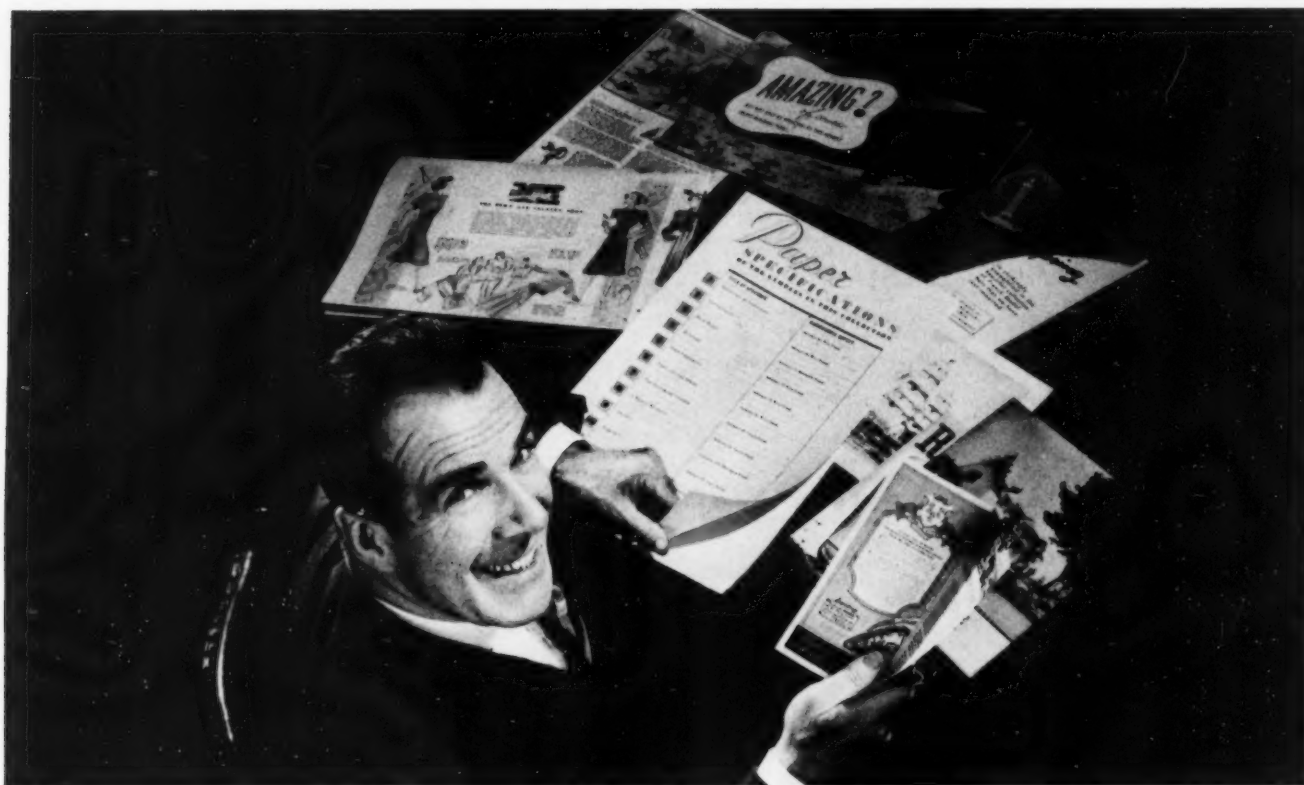
For "jobs" requiring the unusual in sales and eye appeal: recommended for window displays, posters, soap-wrappers and tin decorating.

Resistance Properties:
 Light: Very Good Heat: Very Good
 Alkali: Excellent Alcohol: Excellent

The SENELITH INK CO., Inc.
32-34 Greene Street New York, N.Y.

Want some selling ideas?

HERE'S THE SORT OF OFFSET WORK
CUSTOMERS ARE BUYING NOWADAYS



PRINTING JOBS originate as ideas. When a customer knows what he wants, he's in the market. When you place an attractive printing job before him—and he likes it—he's a "hot" prospect.

Where can you get such ideas? Well, for instance, from the new portfolio of commercial jobs on Hammermill Offset.

Send for this collection and study its specimens. Here are samples of work other people are using today—ideas that may prove profitable to you.

And note that on Hammermill Offset, type is sharp and readable . . . halftones are rich and lifelike with unusual third-dimensional depth.

What the Coupon Will Bring You

Specimens of top-notch offset jobs produced for 11 different advertisers . . . folders, booklets, catalogues, broadsides . . . examples of 1-color, 2-color, 4-color work . . . "different" treatments in layout and design . . . a warehouse of useful new ideas.

Send It Now

Examine the colors . . . brilliant, sparkling, in perfect register. No trouble from show-through on two-sided jobs. Hammermill Offset's closely knit surface holds inks where they belong—on their own side of the sheet.

Get this portfolio and use it as an idea generator for your customers. Show them how to make their broadsides and catalogues click. Run a few sheets on your next job, and you'll see why lithographers like Hammermill Offset. This paper is fast and trouble-free on the press . . . prints clean . . . holds accurate, fine-line register, winter or summer. It pays you a double profit—one when you run the job, a second when your satisfied customer reorders.

HAMMERMILL OFFSET

BY THE MAKERS OF HAMMERMILL BOND

*Send
for it!*

PL MAR

Hammermill Paper Company, Erie, Pa.
Please send me, free, the Portfolio of Commercial Reprints on Hammermill Offset.

Name _____

Position _____

(Please attach to your business letterhead)

SENEFELDER has "everything for lithography"

Buy from Senefelder and enjoy one responsibility and one high standard of materials, workmanship and service



FOR INSTANCE CONSIDER

SENEBUMEN

(Scientifically Pure Egg Albumen)

When offset plates are prepared by the albumen process pure hen egg albumen must be used. All other kinds of albumen give less satisfactory results.

The hen egg albumen usually employed consists of the whites of eggs in dried flake or scale form. Sometimes the flakes are ground into powder. For lithographic purposes flakes are preferable, because they do not form lumps or blisters like powder does when dissolving. Also, they are less apt to be adulterated with caseine, dextrine, gum, glue, gelatine, etc.

Ordinary hen egg albumen fresh from the shell contains a certain amount of insoluble protein matter which is a detriment in plate making. These protein particles also cause deterioration in the egg and produce that offensive smell so characteristic of all dried eggs or ordinary egg albumen.

In order to overcome these objectionable features without changing the basic properties of hen egg albumen, we have developed a new process with the assistance of one of the largest egg albumen producers. With this process a scientifically pure and odorless product is obtained. This is marketed under the name "Senebumen."

Senebumen is a scientifically pure hen egg albumen especially prepared for the graphic trade. It is free from offensive odor, fully soluble in water and guaranteed always to be uniform in quality.

Senebumen is the ideal sensitizer for use on zinc and aluminum offset plates either with paper, film, or glass negatives; it definitely overcomes the usual albumen troubles and eliminates plate make-overs.

Senebumen is packed in 7 lb. containers at \$1.25 per lb.; in 25 lb. containers at \$1.20 per lb.; in 50 lb. containers at \$1.15 per lb.; in 100 lb. containers at \$1.00 per lb.; in 200 lb. containers at 95c per lb.

Senebumen coated plates should be etched with Strecker Salt Solution, inked-in with Senetone Developing Ink and washed-out with Cornelin Solution to obtain optimum results. All of these products are guaranteed pure like Senebumen and have a beneficial reaction upon one another.

Absorbent Cotton	Graining Marbles	Rolling-up Ink
Acids, Litho	Graining Quartz	Rosin Powder
Acid Brushes	Gum Arabic	Rubber Snake Slips
Alum Powder	Hand Rollers	Rubbing Stones
Aluminum Plates	Hydroquinone	Schumacher Slips
Antiflin Rubber	Impression Rubber	Scotch Hone
Preserver	Sheeting	Scotch Slips
Asphaltum Liquid	India Paper	Scotch Tape
Asphaltum Powder	Ink Mullers	Scraper Leather
Berlin Paper	Ink Knives	Scraperwood
Bronze Powders	Ink Slabs	Senebumen
Bronzing Pads	Kalinin Drier	Senelac Varnish
Carborundum Powder	Lavender Oil	Sensitizers
Cautic Soda	Liquid Tusche	Sharp Etch
Cellulose Cleaning	Litho Inks	Snake Slips
Paper	Litho Stones	Soapstone
Charcoal Sticks	Lump Pumice	Sponges
Chemicals, Litho	Magnesia Carb.	Steel Balls
China Marbles	Maple Balls	Steelclay Marbles
Cold Top Enamel	Mica Powder	Stone Cement
Collodion Emulsion	Moleskin	Strecker Salt
Columbia Paper	Molleton	Sulphur Flour
Copierlack	Mutton Tallow	Tracing Blue
Cornelin Solution	Negative Brushes	Tracing Paper
Correction Slips	Negative Collodion	Transfer Ink
Counter Etch	Negative Glass	Transfer Papers
"Convenient"	Negative Varnish	Transparency Solution
Crayon Holders	Neg-O-Lac	Tusche
Crayon Ink	Nitric Acid	Varnishes
Crayon Pencils	Offset Blankets	Wire Brushes
Crayon Transfer	Offset Inks	Zinc Plates
Paper	Offset Powder	Etc., Etc.
Crayons, Litho	Opaque	
Deep-Etch Supplies	Palm Oil	
Developing Ink	Pen Ink	
Double Etch Salt	Pens, Litho	
Duralac Lacquer	Photographic	
Egg Albumen	Gelatine	
Engrav. Needles	Planum Etch Salt	
Engrav. Stones	Plates, Lithographic	
Etches	Press Boards	
Excelsior Paper	Printing Inks	
Felt Daubers	Process Glue	
Film Filters	Process Oil	
Flannel, Litho	Proofing Inks	
Flint, Graining	Pumice Powder	
Fly Cord	Quartz, Graining	
Fountain Etch		
French Chalk		
Gamburger Slips		
Gelatine Folia		
Glass Marbles		
Glycerine		

THE SENEFELDER COMPANY, Inc.

32-34 GREENE ST.

"Everything for Lithography"

NEW YORK, N. Y.

THE PHOTO-LITHOGRAPHER

PUBLISHED IN THE INTERESTS OF LITHOGRAPHERS EVERYWHERE



THE COVER

Night scene on Treasure Island, Golden Gate International Exposition, San Francisco. In the background, at the south end of the Court of the Seven Seas rises the brilliantly lighted Tower of the Sun.

March, 1939

Volume 7 Number 3

About that article we announced last month for this month's issue... "Type Faces for Lithography"... by Frederic W. Goudy... we have received the following letter:

Owing to interruptions, a week's illness and absence from home since last Wed. until 5 this evening, I've not been able to get as much done as I'd like. Can't I beg off for another month? A book to be out on the 8th asks for an introduction and I'm trying to do it tonight and I don't know whether I'm afoot or horseback. Please?

FRED W. GOUDY

We told Mr. Goudy to take as long as he liked with the article. We told him we could well afford to wait... because we knew that in the end our waiting would be richly rewarded... Secretly, however, we kept hoping he'd say, "Oh I'll have it for you next month sure." And maybe he will.

WHAT YOU WILL FIND IN THIS ISSUE

	Page
Editorial	13
Pageant of the Pacific	14
<i>By Tommy Tucker</i>	
Color Transparencies	17
<i>By Elbert M. Ludlam</i>	
Coated Papers	20
<i>By Sydney W. Macbeth and William R. Maull</i>	
Union Oil 24-Sheet Posters	22
<i>By Charles E. Kerlee</i>	
New Developments in Plate Making	27
<i>By William C. Huebner</i>	
Pictorial	28
In and About the Trade	33
New Equipment and Bulletins	45
Lithographic Abstracts	51
Where to Buy	61
Advertisers' Index	66

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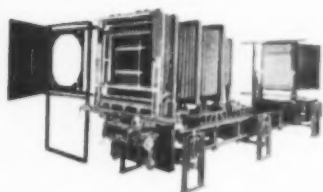
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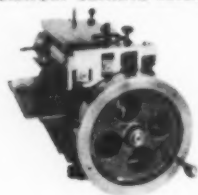
MARCH 1939

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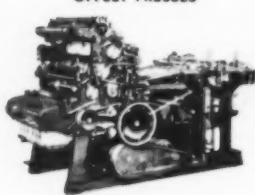
STEP AND REPEAT CAMERAS



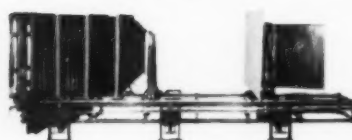
LABORATORY COATING MACHINES



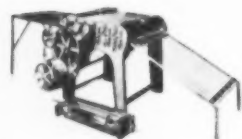
OFFSET PRESSES



PROCESS CAMERAS



PRESS PLATE WHIRLERS



FLAT TIN BRONZING MACHINES



LICENSE TAG COATING MACHINES



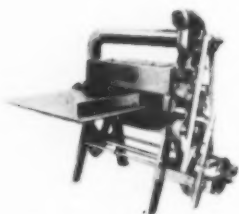
LITHOGRAPHIC HAND PRESSES



OFFSET COLOR PROVING PRESSES



VACUUM FRAMES



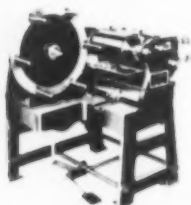
METAL DUSTING MACHINES



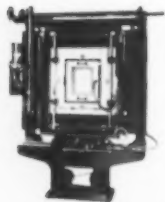
"STREAMLINE" SPOT COATING MACHINES



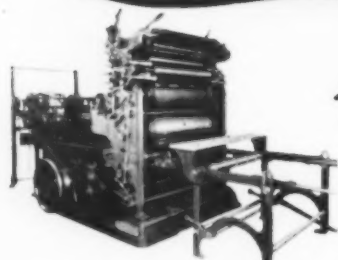
SUCTION ENLARGING BACK FOR FILM OR PAPER NEGATIVES



COLLAPSIBLE TUBE COATING MACHINES



JUNIOR PHOTO COMPOSING MACHINES



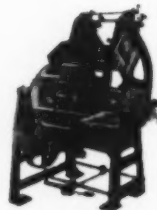
"STREAMLINE" ROTARY METAL DECORATING PRESSES



GRAINING MACHINES



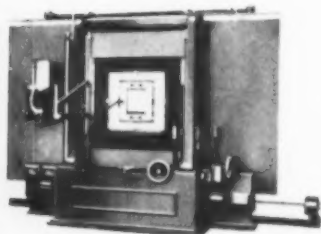
WHIRLERS FOR GLASS PLATES



TWO COLOR TUBE COATING MACHINES



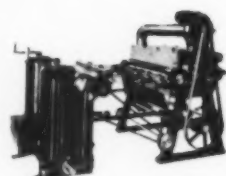
PHOTO-LETTERING MACHINES



PRECISION PHOTO COMPOSING MACHINES



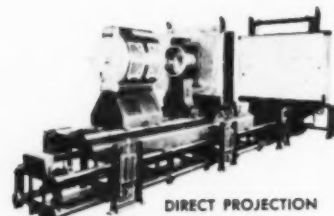
AUTOMATIC SUCTION PILE FEEDERS (attached to Coating Machine)



AUTOMATIC PILE LIFTS (attached to Dusting Machine)



MULTI-COLOR COLLAPSIBLE TUBE PRINTING MACHINES



DIRECT PROJECTION MACHINES

CONSULT *Rutherford* for EQUIPMENT

The equipment illustrated on this page represents but a portion of the manufacturing facilities of the Rutherford Machinery Company. Special machinery designed upon request.

RUTHERFORD MACHINERY COMPANY

DIVISION - GENERAL PRINTING INK CORPORATION

NEW YORK CHICAGO SAN FRANCISCO

TORONTO MONTREAL

ESTABLISHED 1870



Confidence

"Confidence is a plant of slow growth"
— WILLIAM PITT

FORTY-NINE years ago, the Sinclair & Valentine Company began the manufacture of inks for the Lithographic Industry. The steady growth of our business from a small local supply house to a nation-wide organization with eighteen branch offices, is the best proof of the confidence our customers have in S & V products. We shall always endeavor to merit a continuance of their confidence and good-will . . . our most valued assets.

To enable our distributing organization to give a more complete service, we are constantly adding to our line of products. In this connection, we will shortly have an important announcement to make to the industry.

INKS

Wherever You Are, There's a Branch to Serve You

SINCLAIR & VALENTINE CO.

MAIN OFFICE AND FACTORY: 611 WEST 129th STREET, NEW YORK, N. Y.

Albany
Baltimore
Boston
Chicago

Dayton
Dallas
Cleveland
Jacksonville
Birmingham

Kansas City
Los Angeles
Miami
Nashville
New Haven

Philadelphia
San Francisco
Seattle
New Orleans

Do you know_____

What wage scale is in effect in different parts of the country?

What are production standards and economic hourly cost for every department in a lithographic plant?

What the better photo-lithographers suggest as charges for press work, wash-ups, half-tones, strip-ins, reverses, proofs, running difficult papers, etc.?

What is a reasonable commission to be paid to salesmen?

Where you can obtain a uniform cost system?

Where you can get help on problems constantly arising in your plant?

You can have information on problems arising every day in your plant by joining

The National Association of Photo-Lithographers

1776 BROADWAY

NEW YORK, N. Y.

Confidential Bulletins sent periodically to members.

Membership dues very reasonable.

Minimum \$25.00

Maximum \$250.00



SCIENCE MEANS MORE

than laboratory tests and carefully compounded formulae

The success of science in roller-making depends upon the actual usage given rollers under the conditions they must meet.

IDEAL LITHOGRAPHIC ROLLERS during the past twenty years have proved their excellence and fitness for the purpose designed.

IDEAL LITHOGRAPHIC ROLLERS have been improved to meet new press requirements, new methods of lithography, new standards of quality. It has been possible to do this only because our laboratories have followed so closely the performance of these rollers in actual use.

IDEAL LITHOGRAPHIC ROLLERS have a surface which is dry, non-greasy and does not

repel water nor allow an accumulation of water to form in the distributor or intermediate position. This makes it by far the best roller for reproducing heavy solids, light tints or small amounts of ink coverage.

IDEAL LITHOGRAPHIC ROLLERS of today are far better rollers than we made twenty or even ten years ago, because we have made use of our long experience in manufacturing them.

So far as service and quality are concerned, **IDEAL LITHOGRAPHIC ROLLERS** are the most economical you can buy. They cost you less than one per cent of the value of the finished products on which they are used.

IDEAL ROLLER & MANUFACTURING CO.

CHICAGO, ILLINOIS • LONG ISLAND CITY, NEW YORK

Branch offices are located in the principal cities

THE PHOTO-LITHOGRAPHER

Rides Again!



DARBY: (on the left) "See that fellow with the upper lip?"

JOAN: (on the right) "You mean him that's looking at us?"

DARBY: "Yeh."

JOAN: "Sure I see him. Why?"

DARBY: "I'm going to take him for a *ride* some day."

JOAN: "What'd he do to you?"

DARBY: "We went out for a canter the other day. Fine spring afternoon. I was all het up and rarin' to go. Wanted to gallop like anything. But what d'ye suppose he did?"

JOAN: "What?"

DARBY: "Why he held me in check the whole time while he set up there and read some magazine or something."

JOAN: "It must have been THE PHOTO-LITHOGRAPHER."

DARBY: "That's what it was! How'd you know?"

JOAN: "Oh I've been out with the same guy."

WHETHER you're a horseman, fisherman, yachtsman, golfer, or horseshoe pitcher, if you are at the same time a lithographer, you'll want to squeeze THE PHOTO-LITHOGRAPHER into your busy round to keep abreast of everything that's happening in your industry. New technical developments, new marketing angles, the legislative news — all of these are covered in pithy, informative articles each month.

Now that Spring is coming, you'll be outdoors more and more. You'll want to get away as early of an afternoon as your conscience and the weather allows. You won't want to stay at the office after hours to catch up on your reading, important as it is. So why don't you let us send you THE PHOTO-LITHOGRAPHER to your home address? That'll

be much more convenient. After you've watered the lawn, puttered in the garden, or come back from golf, you can get yourself a tall one, climb into the porch swing, relax, and enjoy THE PHOTO-LITHOGRAPHER at its best! Just fill out the coupon. It'll only take a minute.

THE PHOTO-LITHOGRAPHER

254 W. 31st St., NEW YORK, N. Y.

Send me The PHOTO-LITHOGRAPHER every month for a year.
Mail me invoice for \$3.00 to cover — Foreign and Canada \$4.00.

Name

Company

Address

City Country

Type of Business Position

THE PHOTO-LITHOGRAPHER

Lumapitt

AN OFFSET INK

EL

Lumalith



To the parade of progress in the lithographic industry, The Fuchs & Lang Manufacturing Company is proud to present another contribution: an unusual, colorful development in the form of LUMALITH Offset Inks. Scientific laboratory research has combined the warmth of color and the brilliance of metal into a new and unique merchandising aid for the creative lithographer.

LUMALITH Inks open up an entirely new field for offset work and should be of special interest to lithographers who desire to obtain attractive background effects on cutouts, displays, labels, box tops, calendars, and, in fact, any type of color work.

They are particularly adapted to coated stocks, and on such papers dry sufficiently for handling within one to two hours. They are run in the same manner as ordinary lithographic inks, but it is important that a spraying device be used to prevent sticking and marring of the sheets. This is necessary, as in addition to their metallic appearance, they dry with a semi-gloss finish.

LUMALITH Inks have been perfected after careful planning and research and practical pressroom tests have proven them to possess the same good working qualities always associated with F. & L. Offset inks.

The distinctive qualities of LUMALITH Offset Inks have wide possibilities for the progressive, modern lithographer in stimulating new business. Investigate their properties on your next job.

This Folder Lithographed With
LUMALITH OFFSET BLUE
LUMALITH OFFSET GOLD
AND
LUMALITH OFFSET ORCHID

THE FUCHS & LANG MFG. COMPANY

(ESTABLISHED 1870)

DIVISION · GENERAL PRINTING INK CORPORATION

100 Sixth Avenue, New York

BOSTON

CHICAGO

CINCINNATI

CLEVELAND

PHILADELPHIA

ST. LOUIS

SAN FRANCISCO

FORT WORTH

LOS ANGELES

TORONTO, CANADA

Announcing the
Strathmore Family of Staple Papers



Strathmore Text

A new line, samples available soon

Strathmore Fairfield

Strathmore Cover

Name changed from Strathmore Highway Cover

Strathmore Bond

The Strathmore Family of Staple Papers brings you papers for a wide range of printing uses. Each one an outstanding value . . . for its purpose and in its price grade.

Behind each one stands 45 years of experience in *fine* papermaking. And with each one goes all the advantages of Strathmore distribution. Everything, in short, that Strathmore has to offer in Manufacturing and Marketing goes into the papers of this new Staple Family.

And the Strathmore Family will grow with

the addition, from time to time, of other papers to cover an even greater range of usefulness.

The Strathmore Family of Staple Papers puts *price* in the *quality field*. These papers make it possible for you to hold to high standards while cutting down on your costs.

Now . . . with the Strathmore Family of Staple Papers—*paper is part of the picture* more than ever . . . the picture of greater volume in quality printing at competitive prices.



Strathmore Paper Company, West Springfield, Mass.

All you **SHOULD** *pay for* *is* **QUALITY . . .**

Some people ALWAYS pay top prices as a matter of principle . . . some because they want to "keep up with the Joneses" . . . others merely because they haven't EXPERT BUYING ABILITY.

There is no reason for paying MORE THAN YOU NEED to assure yourself of QUALITY. Extra dollars should mean Extra Quality . . . and if you don't get it you are robbing yourself.

SAM'l Bingham's SON great new SAMSON (Vulcanized Oil) roller combines ECONOMY and QUALITY, as hundreds of printers all over the country can testify. Backed by the name of BINGHAM, it has proved a worthy addition to our Litho-Print line.

As for price, a Form Roller $3\frac{1}{8} \times 50\frac{3}{4}$ for a Harris S-7-L Press costs only \$12.24 for SAMSON and \$20.15 for LITHO-PRINT. This size roller was formerly \$22.76, yet in these great BINGHAM products, quality has not been sacrificed.

And the sixteen BINGHAM factories provide economical and convenient service to printers over a wide area.

SAM'L BINGHAM'S SON MFG. CO.

Over 80 years of roller making with plenty of infusion of new blood

CHICAGO

ATLANTA
CHICAGO
CLEVELAND
NASHVILLE

DES MOINES
DETROIT
DALLAS
HOUSTON

INDIANAPOLIS
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Pacific Coast Representatives:

CALIFORNIA INK COMPANY, INC.

SAN FRANCISCO, LOS ANGELES, PORTLAND, SEATTLE, SALT LAKE CITY

THE PHOTO-LITHOGRAPHER

PUBLISHED IN THE INTERESTS OF LITHOGRAPHERS EVERYWHERE

If it's not one thing—

DID you see "Jesse James"? Wouldn't that small-town newspaper owner in the picture, with his stormy petrel editorials on the contrariness, inconsistencies and downright cussedness of human behavior, feel his oats if he were alive today, though?

Twenty-two States, according to the last report, have thus far introduced wage and hour bills—with the probabilities extremely likely that the other twenty-two whose legislatures meet this year will do the same—nearly all of which are at variance with the Federal Fair Labor Standards Act. For example: in most, outside salesmen are *not* exempt from the regulations, all work is limited to eight hours *a day* (except with time and a half overtime), and *no limits* have been placed on the minimum wages which may be set for any given industry. No one needs to be a prophet to foresee the complications that will result if these bills are passed as they now read.

Fifteen States—the number may not be exact but that is unimportant since the others will no doubt follow suit soon—have state food and drug bills pending. Not content to follow the logical course of patterning their legislation after any one of a half-a-dozen model laws which have been drafted for their benefit, or to conform with the Federal Act, the States, to show their independence, and, incidentally, to raise a dollar or two, have thought up a brand new batch of their own, likewise in important respects at variance with the

Federal Act. ("At variance" is a gross understatement. One such bill has a clause outlawing not only misleading advertising, but also advertising likely to create erroneous impressions by what the advertisement leaves *unsaid*. Tie that one!)

Thus, with the speed and the contagion of a pestilence, state legislative restrictions are sweeping the country. The list of requirements for the privilege of engaging in business continues to grow steadily. One state after another considers new legislation requiring licensing, registration and what not. New proposed requirements for the registration of firms, of products, of trade marks, and even of individuals are mounting to positively prohibitive proportions.

All of which, of course, makes the lithographer's job of servicing his customer not only difficult but bewildering. Not only must he see that his own business conforms under the mounting restrictions, but as merchandiser, copy writer and advisor on many another promotion front, he must watch his client's as well.

We don't know how lithographers propose to keep posted or abreast of all these new legislative requirements during the next few months. But we can think of no safer, more reliable, or accurate way than through their trade associations. If we were a lithographer right now, we would run, not walk, to the nearest association office and sign up in a hurry.

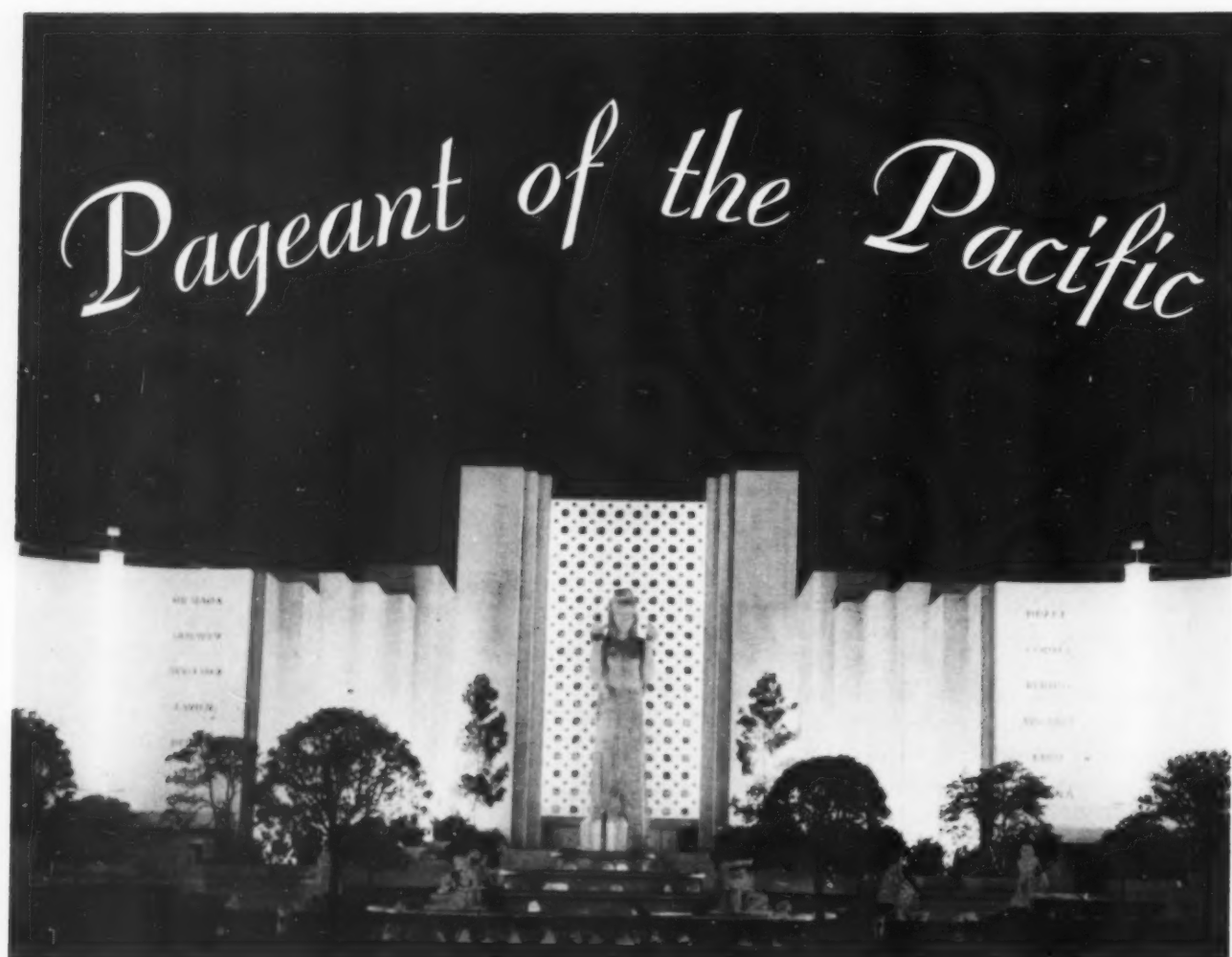
WHEN Governor Olson turned the key in the "little Golden Gate" beneath the Triumphal Arch, which connects the Court of Reflections with the Court of Flowers last month one day, the morning of February 18, if we must stick to facts, he unloosed and put in motion plans, campaigns and promotion that have been growing for the past five years. Plans and campaigns that, needless to say, were abetted by the Graphic Arts of the West.

by TOMMY TUCKER*

and sold to business firms for use on all stationery and business communications. That was in 1934. Here it is 1939. During these five years those stickers have been convenient markers for gauging how close the Fair really was to opening. At first you saw only a few, then, as each month brought the great day closer, you saw more, and then more, and

diagrams, regulations, displays, post cards, letterheads and tickets. (By all means let's don't forget the tickets!) Say what you please, Mister, the Graphic Arts of the West have sold this Fair.

Particularly lithography. Yes, I know. I'm partial to lithography. I'm a prejudiced detached reporter who is partial to lithography. But you would be too if you were out here. It's because whenever you think of color you think of lithography. (Need I say why? Is there



It seems like only the day before yesterday that Knight-Counihan Co. made up those lithographed stickers, miniature reproductions of the first official painting of the Fair. Three million of these were made

* "Tommy Tucker" is the pseudonym for a gentleman well-known in the Graphic Arts who, for reasons best known to himself, prefers to withhold his identity

then more! until finally there was a flood-tide of lithographed stickers.

Those little stickers did their job well. Through them you became aware of the great momentum, and the enthusiasm behind the Golden Gate International Exposition. But not alone through them! There have been posters, booklets, folders, broadsides, maps, forms, checks,

anyone in the audience so grossly unfamiliar with the history of the Graphic Arts in the United States who needs an explanation for that?)

Out here there is color. You who think you know color,—who've seen pomp and ceremony, and the glittering panoply of medieval pageantry, dancing red plumes, white prancing chargers, and all that,—have seen

THE PHOTO-LITHOGRAPHER

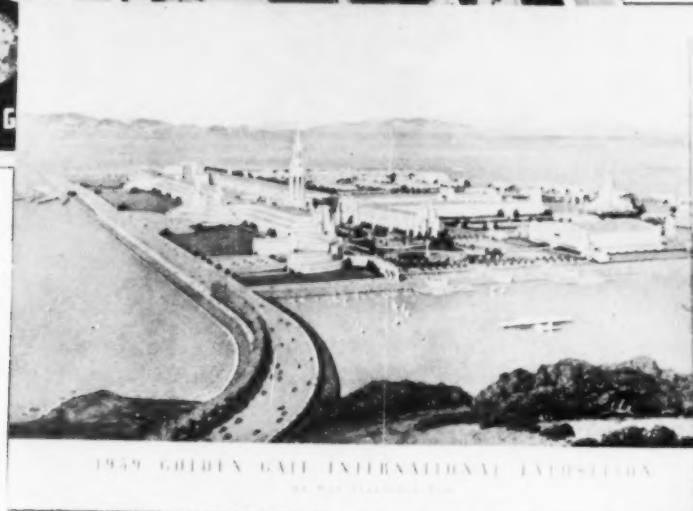


which Crocker-Union lithographed? It is on sale in the Art Palace, as is "The Rice Bowl," also lithographed by Crocker-Union. This company, as you probably know, is the official publisher of the Exposition. The Scroll Award which Crocker-Union lithographed is in seven colors, on parchment paper, 16 x 19. There were 3500 of these printed, to be presented to various notables, such as mayors, governors, executives of firms who are par-

tions were done from Kodachrome.

Crocker-Union has obtained permission from the Exposition to use the plates in the production of advertising material for exhibitors, or for anyone else who wishes to tie in with the Exposition. Already the company has secured a number of orders. Southern Pacific for one, has ordered half a million menus. One of the reasons, in addition to the very good one that it can provide unusual and attractive subjects, is because the customer can be saved the cost of expensive artwork and

(Continued on page 30)



nothing yet. And you won't either until you've seen this Pageant of the Pacific. Hollywood'll never pull anything like this out of the old hat.

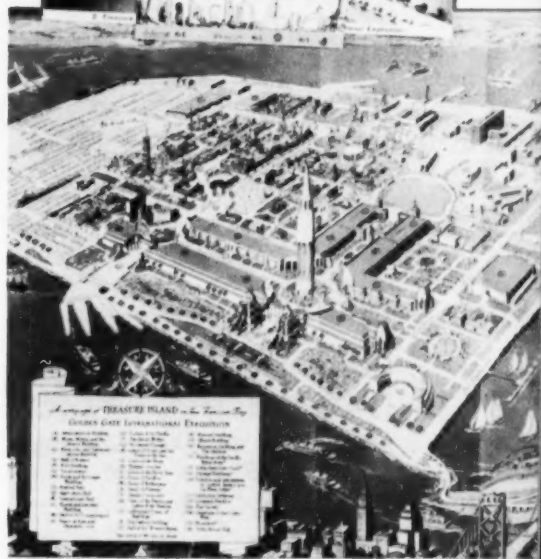
You go over to the fine arts section,—and I'm not digressing when I mention this; I'm fully aware that you asked me to write about the part the Graphic Arts, particularly lithography, has played in the Fair, but I insist that this is a part of the story and that all Graphic Arts people will be interested,—and you see one of the finest collections of color and art ever brought to this country. It contains such masterpieces as Botticelli's "Birth of Venus," Raphael's "Madonna of the Chair," and priceless paintings by Titian, Tintoretto, Michaelangelo and others. The Japanese art is likewise characterized as the finest ever brought to this country.

By the way, have you seen the reproductions of "The Flower Vendor," the painting by Diego Rivera

ticipating in the Exposition, and others.

Crocker-Union, along with Recorder Printing Co., is also publishing *Highlights*, four pages, two colors, two sides, which has been issued every month for the past year to exhibitors and concessionaires.

As official publishers for the Fair, operating as a concession, Crocker-Union has also lithographed souvenir post cards, tickets, posters, the official view books and other items sold to visitors. The official Guide Book is printed, but the cover is lithographed, as is the folding map of Treasure Island and a half-dozen inserts. A million of the Guide Books have been issued already and many more will be required. The post cards are in four colors. Twenty-four subjects have been produced. When finished the series will include sixty-four different subjects. We understand that most of the illustra-





MAGENTA PRINTER



BLUE GREEN PRINTER



YELLOW PRINTER



BLACK PRINTER

These prints were made from a complete set of balanced separation negatives. No retouching and no masking was done so as to indicate exactly what the negatives themselves will give. The original was a 5 x 7 Dufaycolor.

COLOR TRANSPARENCIES

ALTHOUGH the color transparency has been with us now for a good many years, it is only recently, with the advent of Dufaycolor and Kodachrome, that the graphic arts field really awakened to the possibilities which transparencies offer the advertiser and other users of color photographs. Heretofore color photography has been limited to still life pictures or to the very expensive cameras capable of making the three separation negatives simultaneously. The expense of these cameras has made their use prohibitive but now the economy as well as the relative ease with which color transparencies may be taken is rapidly expanding the field of color.

The transparency materials now available are so well balanced as to permit any careful photographer to use them and obtain very satisfactory results. No special cameras are needed nor even special film or plate holders. Any good camera equipped with a well corrected lense may be used quite satisfactorily for color work. Some changes in the photographer's normal method of lighting his subjects may be necessary but it is surprising how little change is needed to adapt oneself to shooting color pictures with the new materials. One of the great advantages is the shortness of the exposures required, making it possible to obtain portraits of children, photographs of groups of people and other such subjects formerly impossible.

The availability of the actual color copy is distinctly of interest to the lithographer, as well as to the

commercial photographer. It makes it possible for

every prospect and customer to select the most desirable shot with a full appreciation of how the colors will reproduce. Heretofore it has been necessary to make the original selection from black and white prints and to then make, at considerable expense, carbros or washoff relief prints in color of the selected picture in order to provide color copy to the lithographer. This has meant added expense as well as considerable uncertainty in making the original selection.

With the color transparencies, the customer can see at a glance whether or not the picture is satisfactory for his requirements from a color angle as well as from the question of composition, pose, etc. Thus, all uncertainty is eliminated and the lithographer is at the same time provided with color copy at no extra expense. All these advantages are rapidly making the color transparency a very important part of the graphic arts field and a discussion of the making of separation negatives from the transparencies is quite timely.

It is very probable that a great many lithographers have hesitated to work from transparencies because of a natural fear that making separation negatives from them would be a whole lot different than making separations from ordinary flat copy. The difference, although distinctive, is not as great as one might think. It is true that we are working with strongly colored transmitted light rather than with the

By Elbert M. Ludlam

weaker light reflected from the pigments of an ordinary painting or water color. The dyes which give to the transparency its color do transmit light of all colors to a certain extent, and probably more so than is true of the reflections from ordinary pigments. As a consequence, it has been the general tendency to use so-called "narrow-cut" filters in an effort to avoid obtaining false color separations.

This, together with the necessity for an unusual degree of enlargement, has probably caused most of the confusion and fear in the minds of those who have hesitated to enter this field of work. The inability of making corrections and alterations on the transparencies, as has been the practice on color copy in the past, has probably also acted as a deterrent to others. Actually, there need be no hesitation whatever; the problem is one of making separation negatives and no unusual difficulties need be expected because of the color being inherent in the transmitted light rather than being obtained by the selective reflection of pigments.

The need for enlarging the small Kodachrome slides is not a serious problem and the screen pattern of the Dufaycolor film does not offer any difficulty providing one is not attempting to enlarge more than about three times the original size. Corrections and alterations, although impossible on the slide, can be made by any good color retoucher

on the negatives without too great difficulty.

The most important question in making separation negatives from transparencies is that of the need for enlargement. Unless highly corrected lenses are available in heavily mounted enlarging cameras, capable of absorbing the machinery vibrations common in most shops, it is much more advisable to make contact separation negatives and enlarge these when making the intermediate positives. If highly corrected lenses are available and it is preferred to enlarge when making the negatives, it is best to enlarge the negatives to about one-half the final size and complete the enlargement in making the intermediate positives. To make screen negatives directly from transparencies is decidedly inadvisable and will result in soft diffused detail. The additional time and material used in making negatives and intermediate positives will be well repaid in sharp results full of detail. The time will actually be saved in the last analysis because it will be unnecessary for the retoucher to endeavor to fake back the detail, so that where more expense is incurred at the beginning, the final results will be far superior and a saving will be made.

A great deal has been said in the past both for and against masking the separation negatives with thin positives. In actual practice very little seems to be gained by masking the negatives; in fact, I have often seen negatives masked by positives which were harmful to final results rather than helpful. That masking is not satisfactory is conclusively proven by the fact that no two houses can ever agree on how the masks should be made. In making separation negatives from transparencies the best practice is to use the F, N, C4 & K3 filters. It should be remembered that the effect of using sharp cut filters is to prevent other colors than the color of the filter itself from affecting the negative.

The positive will lay on more ink over those areas of a color which the filter has prevented from passing. If we carry the idea of using heavy

filters too far, however, our final picture will be decidedly heavy and grayed. Therefore, if difficulty is experienced with the colors being too grayed in the final print, it is an indication that our filters are too sharp cut and that the A, B, and C5 filters should be substituted for the F, N & C4, thus permitting a wider band of colors to pass through to each separation negative. It will follow, then, that the inks which are having the effect of graying our colors will be held back. This is much more preferable than masking.

THE plates to be used are the same as in any color separation work with the exception that where contact negatives are being made from the miniature Kodachromes, care must be exercised to use a plate, susceptible of very fine grain development, permitting enlargements to 16 x 20 inches without any appreciable grain or diffusion. The light source should preferably be a white flame carbon arc so as to avoid any unduly large difference between the exposures for the red and green filters and that for the blue, thereby gaining somewhat better contrast in the blue separation.

With care, however, tungsten lights or photoflood lamps will give very satisfactory results. The filter-factors supplied with the plates are carefully prepared with standard illuminants at the factory and can be relied upon unless light sources of unusual characteristics are being used. Many photographers insist that they have not found these factors to be correct but careful consideration usually reveals that the first negative made was incorrectly exposed and, as this is usually the one with the smallest factor, the error in the other negatives was magnified by the increased factor.

The exposure should be carefully timed to give full detail in the densest shadow. A gray scale incorporated with the copy is of great convenience, in fact, it is indispensable in determining correct development but the exposure for the first negative should be determined so as to give full detail in the densest shadow. By applying the filter factors the exposures for the other

negatives are then easily calculated and will be found to be as close as possible to perfect results.

The development for the magenta, blue-green and yellow printing negatives should be carefully balanced to obtain the same contrast in all three. As a general rule, it will be necessary to increase the development for the green filter or magenta printing negative a little more than 10 per cent above that for the red filter or blue-green printing negative. The blue filter, or yellow printing negative, must be increased between 40 and 45 per cent above that for the red filter negative. The black printer negative made with a K3 filter will give sufficient contrast if developed the same length of time as the green filter negative. It should have sufficient contrast so that the shadows will print with a full dot whereas the high-light tones will remain clear.

The illustration shows a set of positives made from such a correctly balanced set of separation negatives, and it will be noted that the scale for the magenta, blue-green and yellow printing plates carries completely into the high-lights and shows excellent balance between them. That for the black printer, however, shows no density in the first six or seven tones of the highlights, although printing full strength in the deepest shadows. This avoids any graying of the lighter tones while still giving full strength to the shadows. As a specific recommendation, DK 50 will be found excellent where enlarged negatives are being made. The developing time for the red filter running from six to eight minutes, depending upon the degree of contrast desired. Where contact negatives from miniature Kodachrome are being made, the fine grain formulas, such as Panthermic 777, will be found most suitable. Complete recommendations for developing time for any given degree of contrast under different temperature conditions are included with every package and will be found very reliable.

In discussing the exposures a while ago, it was stated that they

THE PHOTO-LITHOGRAPHER

CLOISTER BELLS

VOL. VIII. NO. 17

SEA ISLAND, GEORGIA

BY SUBSCRIPTION



LITHOGRAPHED BY JOHN W. HARLAND CO., ATLANTA
FOR THE CLOISTER BELLS, SEA ISLAND, GEORGIA



should be sufficient to obtain full detail in the densest shadows rather than a just perceptible density through the deepest tone of the *gray scale*. This cannot be emphasized too much since the transparencies which will come into the shop for reproduction will vary a great deal from thin ones, requiring relatively short exposures, to very heavy dense transparencies, requiring greatly prolonged exposures.

Another factor which is frequently completely overlooked in working from all transparencies, with the exception of Kodachrome, is that a screen pattern of colored elements is incorporated in the film by one method or another, and that the clearest highlight obtainable is in reality a fairly deep shade of gray, being the density of the screen pattern itself. As a consequence, a gray scale made on the same material, that is Dufaycolor, Finlay color, etc., is much to be preferred to a plain gray scale, since the lighter tones of a plain gray scale are much too thin to be comparable with the highlights in the transparency. The only material at present in which this is not true is Kodachrome where a pure highlight, when correctly exposed, is represented by practically clear film.

It is not a difficult matter to make the gray scales on Dufaycolor or other screen type color material, since it is unnecessary to reverse the film in development as would be the case if color was to be obtained. To make such a gray scale, expose a piece of material, say Dufaycolor, behind an ordinary film scale, such as may be purchased from any of the film manufacturers, and develop in any developer of moderate contrast, fixing and washing in the ordinary way. Such a scale, when incorporated with the copy, will give a much more accurate picture than can be gained from a perfectly clear scale and will avoid considerable difficulty when making the intermediate positives, since it is a natural tendency to be governed by the highlights of the gray scale in determining the correct exposure for the intermediate positives.

It is, of course, obvious that if the

negative exposures were not determined from the gray scale, but instead were governed by the shadow detail of the transparency, the highlights would receive a proportionately longer or shorter exposure. This would have an effect on the intermediate positive, since its exposure must be determined by the highlights of the subject itself rather than by the highlights of the gray scale.

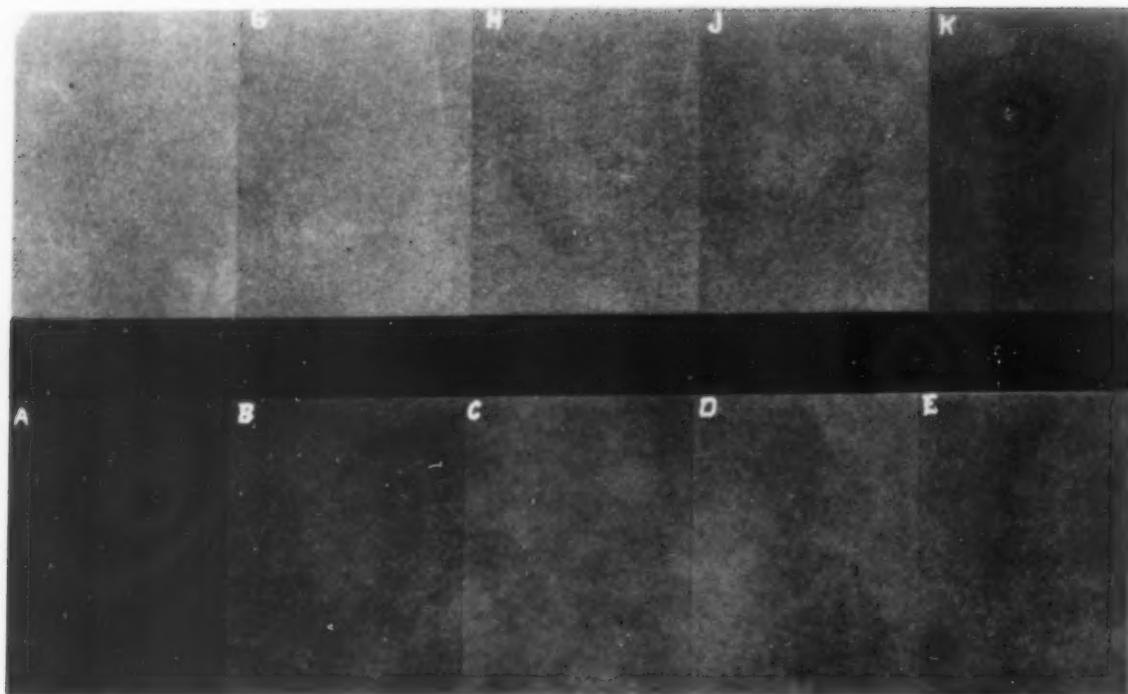
As this is a very important point, and one not readily grasped, the general tendency being to follow the gray scale itself and ignore the subject, I would like to suggest a simple experiment. Take three slides and make from them three negatives, including each slide on each negative. This is readily done if contact negatives are made. One slide should be about normal density, one quite thin and another quite dense. Each of the three negatives should be exposed for one of the three transparencies. The transparency considerably thinner than normal will yield a good negative with a relatively short exposure (no filter need be used for this experiment). The negative from the normal slide will be weak in the shadows while that of the heavier slide will be much too thin. Similarly a second negative of the three slides may be made exposing for the normal transparency and a third exposing for the denser transparency. If the gray scale has been included in each negative it will be found naturally to be successively heavier for each increase in exposure.

It will be readily seen that if the gray scale itself is permitted to govern the exposures, a result similar to the second case will be obtained, the thin transparency giving positives much too weak and completely washed out, whereas the heavier transparency will give a positive very much heavier with grayed overcast highlights and deep opaque shadows. Great care must be exercised in these exposures if the best results are to be obtained and too much reliance on the gray scale and rule of thumb methods cannot be depended upon. As stated before,

once the correct exposure has been obtained for one of the negatives, the filter factors can be applied to obtain the exposures for the other negatives.

If, in following the filter factors recommended by the manufacturer of the plates, one of the subsequent negatives appears too thin or too dense, it would be advisable to check over the first negative carefully and to study the color of the transparency before arbitrarily assuming that the factor is wrong. It is perfectly possible that the picture may contain very little of the color of that specific filter and the result of a correctly exposed negative might readily appear to be quite underexposed. If the exposure is arbitrarily increased, assuming the filter factors to be wrong, the result would be to weaken the impression made with the corresponding ink, a fault which would be very difficult to discover until the final proof was made. Then it can only be corrected with great difficulty. If the first negative shows adequate detail in the shadows, then the exposure and development should be adjusted to yield gray scales matching that in the first negative. This gives a very excellent check on the filter factors as well as on your calculations since we do make errors in applying the factors.

It is the retoucher's job to carefully compare the negatives and later the positives with the original copy and to make such alterations as are necessary to bring about the correct balance of the inks and to give the original colors. In lithography, where relatively little work can be done on the finished printing plate, it is of the utmost importance that the retoucher thoroughly understand his work. Working from transparencies is very different from his point of view than working from flat copy. When working from paintings, etc., a gray scale, running from white paper to the deepest black is incorporated together with spots of the four printing inks which will be used in the final run. In this case the gray scale will be reproduced as closely as possible to the
(Turn to page 49)



1. Variations existing in a range of coated papers, from the least ink receptive to the most ink receptive.

COATED PAPERS . . .

By SYDNEY W. MACBETH and WILLIAM R. MAULL

The Mead Corporation

THERE is a wide variety of paper stock being used for offset printing today. This includes, of course, several kinds of coated papers produced by different coating formulas or on different body stocks. All of these various paper stocks are being used with a fine measure of success which is at once gratifying and encouraging to paper manufacturer, press manufacturer, ink maker, lithographer, and the buyer of advertising and printing alike. For each has contributed his share in the development and it is gratifying to know that the worth of much research and experiment has been proved.

Now, however, that the lithographer's tools and the materials he works with,—press, ink, plates, camera, etc., as well as paper,—have been brought to such a point of development that, if properly

used, offset printing can be turned out that is second to none, it might be well to spend a little more time getting to know those tools better, studying their characteristics and their many different uses so that a more intelligent and discriminating use might be made of them. Not that they are unintelligently used today. That is not the point. But the lithographing industry, because of the very nature of its process, requires what, for want of a better term, we shall call "production control."

As an example of what is meant, take coated papers: there are several different kinds, as we have mentioned, so that given a definite offset job there are different characteristics of coated papers which should be studied and determined, and from that a choice made that will give the results required. Time

spent in carefully selecting the right paper for the job, or in establishing a standard type of paper for one class of work, will eliminate many pressroom problems, set a higher standard of efficiency and insure delivery of the customer's job on the date promised.

An article such as this can, of course, only cover the high spots of such a broad subject. Books could be written on it. It is hoped, however, that sketchy as it is, this article touching on some of the variables common to coated papers and the means by which they can be detected, will be of some assistance in making a more intelligent choice and in laying a foundation for closer production control. At least so far as choice of paper is concerned.

Without a doubt, a comparison of the ink acceptance characteristics of

THE PHOTO-LITHOGRAPHER

the various coated papers is of paramount importance to the lithographer. In the photograph captioned No. 1 an attempt has been made to show the variations existing in a range of coated papers, from the least ink-receptive to the most ink-receptive. A photograph cannot adequately convey the variations, of course. To represent them graphically it is necessary to conduct an actual demonstration. However, by closely observing the photograph, definite gradations in the ink receptivity of the coated sheets, each of which has been initialled in the upper left corner, can be detected. Compare, for example, A and K, or E and B.

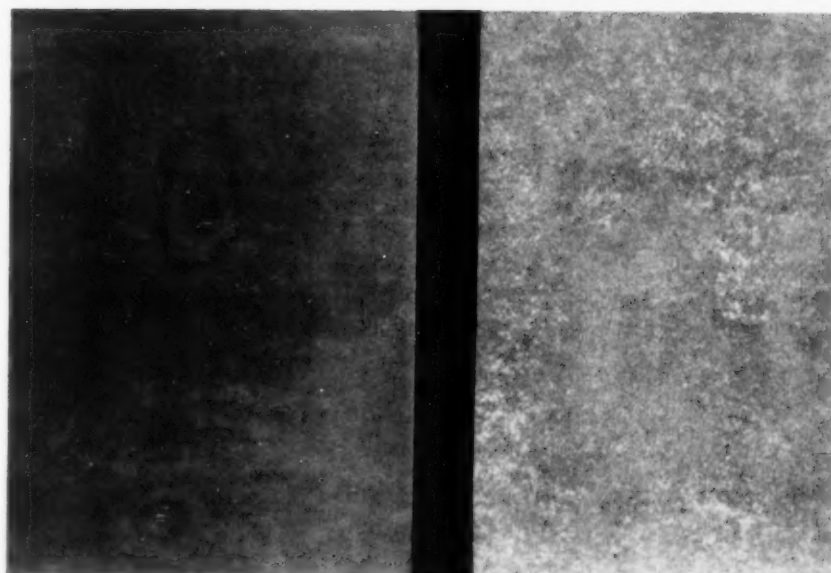
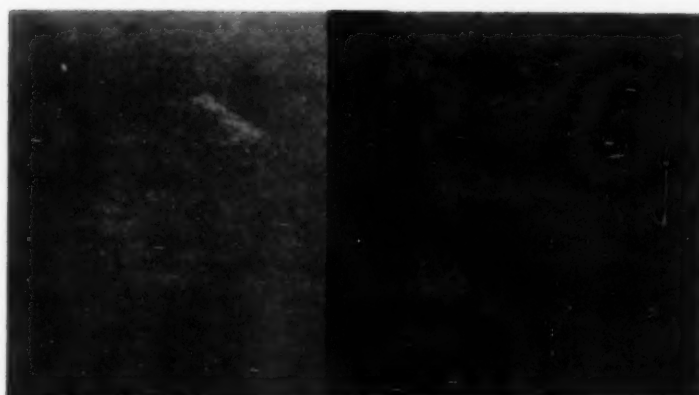
The photograph shows a practical demonstration. No scientific explanation of the results will be attempted here. It is enough to point out the definite value of a similar test,—directions for carrying it out will be given presently,—for determining which of two or more papers will accept ink in greater amounts and dry faster. Since the same kind of ink is applied to all of the sheets simultaneously, the absorption of the ink and resulting stain is a measure of the drying time. A deep color indicates a fast drying sheet, a light color indicates a slow drying sheet, and so on.

To make the test the following procedure was used:

An ink of a staining or dyeing nature rather than a pigmented one was chosen. There are inks especially manufactured for this purpose. However, experience on the part of the operator is of greater importance than the use of any particular ink, so there is no need to limit the test to the use of a special ink. The ink is thinned to such a consistency that it can be handled easily on a pallet knife. It is then applied to the samples of the paper, which are so arranged that a one- or two-inch strip of ink can be spread on all of the samples of paper simultaneously. A definite length of time should be allowed to elapse before the excess ink, or that which is not absorbed, is wiped off. A soft rag is used for this purpose. The exact length of time which should elapse

is determined by trial. It varies with the kinds of papers tested. In the case of coated papers, four minutes

are best. The point to be borne in mind is that contrast is necessary
(Turn to page 57)



2. (Top) Difference in two coated papers of the uniformity of ink acceptance. 3. (Middle) Comparative resistant qualities of two coated papers to varnish or lacquer. The sheet on the right, reflecting the glass utensils is to be preferred. 4. (Above) A strong light in back of two coated papers shows comparative qualities of resistance to varnish penetration. Actual penetration produces translucency, as in the sheet on the right.



"—we blocked the car up on the road so that it would be above the snow banks. I certainly would have enjoyed having along some of those artists who cry 'You photographers have such an easy time—all you do is snap the shutter.'"

By Charles E. Kerlee

Last month you will recall we showed several examples of the work of Mr. Kerlee. We mentioned that he was making a series of shots for 24-sheet posters for Union Oil Company, lithographed by Schmidt Lithograph Company. This month we are happy to give you the story behind the making of those posters, as re-told by Mr. Kerlee from an account that originally appeared in Camera Craft. While some of the problems he ran into do not ordinarily fall to the lithographer, the complete story is so interesting that we thought you'd like to read it in toto.—Ed.

"We first dug a hole about three and a half feet deep and put the camera into it."

"The method of reproducing the posters is an application of Schmidt Lithograph Company's Direct Projection method."

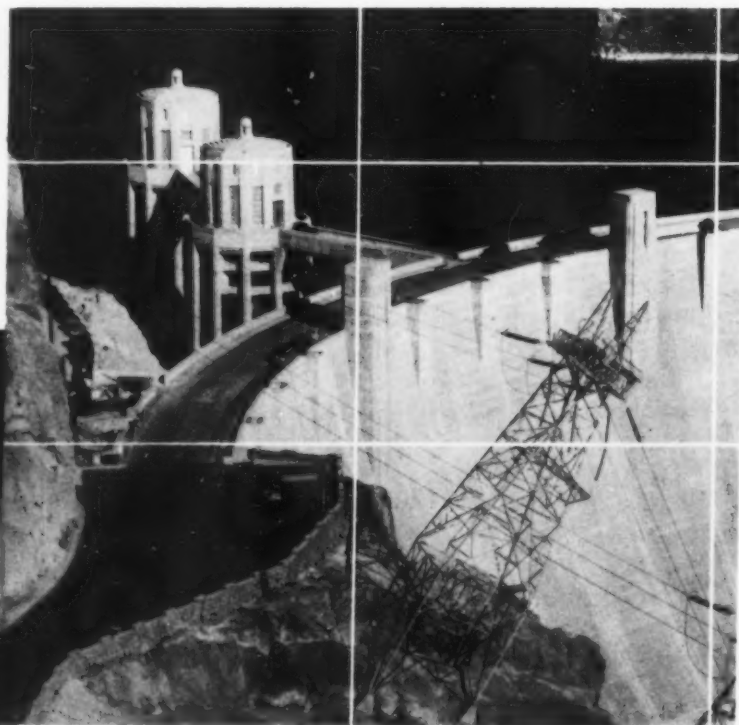


UNION OIL

THE story back of the Union Oil 24-sheet posters will, I feel, be of interest to some of your readers. They are certainly new and different. In order to give the whole picture, I think it would be best to start from the beginning of the idea itself.

Approximately a year ago, Mr. Robert Freeman, the art

"—the plate making and printing must be 'on the head' since the 8 full sheets and 4 half-sheets,



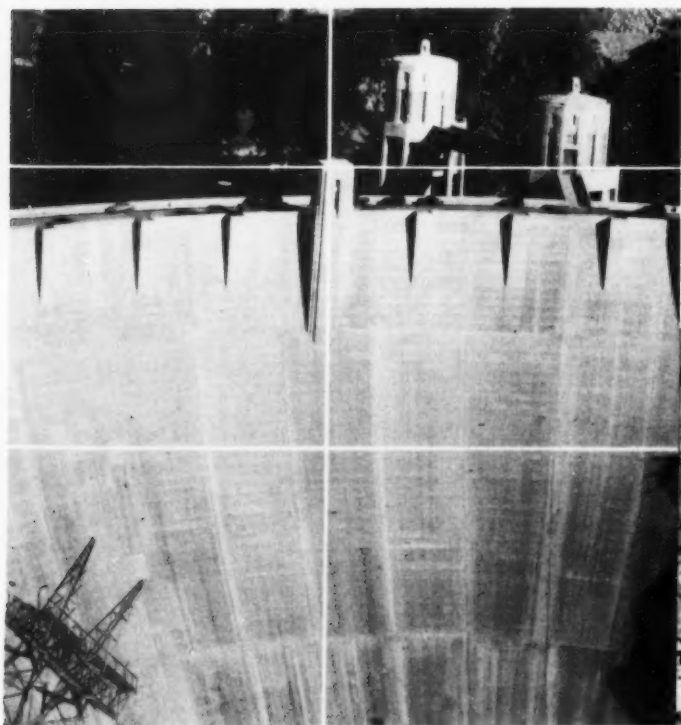


"—due to the fact that we were surrounded by large trees, the sun only hit the place on Mt. Shuksan where the car and models were posed for about four minutes during the day. About 4 o'clock on the third day we clicked the shutter."

24-SHEET POSTERS

director for the Lord & Thomas advertising agency in Los Angeles, called me to come in and see him about a job he had in mind. When I arrived at his office, he explained that the job was an idea on 24-sheet posters for the Union Oil Company. They were to be in color. The first step in working out the poster

shown here as they were divided for the Boulder Dam poster, must match for color and density."



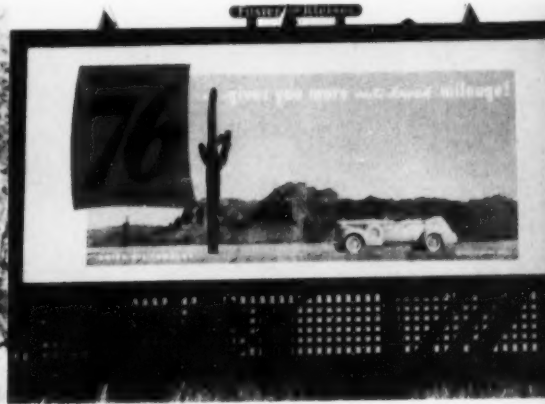
campaign was to make up a presentation, for presenting the idea to Mr. Badger, the advertising manager of the Union Oil Company.

Mr. Bob Philippi, the account executive for the Union Oil account, came into the office, and after we had discussed the matter it was finally decided that the presentation should be made with Kodachrome, since it could be projected onto a large screen and would give Mr. Badger and the other Union Oil executives a better idea of how a finished poster would appear on the boards.

From the selling angle there were two ideas to be considered. One was close-ups of good-looking models. The other was landscapes of interesting locations in the Western states. While the close-ups would be interesting to do, and also could be handled along the more traditional line

"—to get the car in the Mt. Shuskan picture it was necessary to build a platform out over the canyon for the camera."

"—one of the most interesting things about these posters has been the favorable public reaction."



of poster technique, the landscapes offered a really better sales angle.

In the landscape idea, we would be able to feature a different automobile in each poster, which of course would tend to create goodwill with the automobile distributors. Also, the fact that each month we would feature a particular locality, would encourage people to drive to these locations, thus promoting not only the sale of more gasoline, but also create a feeling of goodwill for the Union Oil Company in the locations featured.

The choice between these two ideas hinged upon the question of whether we could make landscape photographs interesting and dramatic enough to make presentable posters. Naturally, in poster work the illustration must be as simple as possible and still retain a great attention value. The average time a person has to look at a poster is about thirty seconds, since, from surveys, the majority of the poster audience is moving past a poster about thirty miles per hour.

Naturally, Mr. Freeman and Mr. Philippi realized that in using photographs of landscapes, it would be impossible to make them all really orthodox posters, from a standpoint of pure "poster" design. However, they felt that the fact that the boards would be different, plus the added advantage of the goodwill they would bring to the Union Oil Company, would offset the fact that they might not be, in every case, what could be called a "smash" poster.

We realized that the test of the whole idea would be in the Kodachrome which I would have to make for the presentation. I was, to say the least, worried about the landscape idea, but I could understand that they were really the best bet from the sales angle.

I made the close-ups with very little trouble. And early one morning we started for Lake Arrowhead to make the landscapes. We drove up to the lake, looked around, had a flat tire, and at 3:00 P. M. I hadn't made a shot. By this time the job really started to look tough. I made a few shots around the lake, which I felt were not quite good enough, and we started back to Los Angeles. On the way down the grade, I suddenly realized I was going to get a break after all. A heavy fog, or haze, had come into the valley below us, and the tops of the foothills and mountains jutting up through the fog made a very interesting and dramatic background. We found a suitable spot to place the car, and made a number of shots, using the fog and mountains as a background.

When the processed Kodachrome came back from Rochester, I picked the best transparencies from both the close-up shots and the landscapes and took them down to Mr. Freeman. Together with Mr. Philippi we projected them and, as we expected, the close-ups had more attention value. However, the landscapes were not bad. Mr. Freeman picked one close-up and one landscape transparency, and I made

16" x 20" black and white enlargements from them, which were cropped to the 24-sheet proportions and mounted with the layout for a finished poster. These, with the Kodachrome slides, were presented to Mr. Badger of the Union Oil Company.

It was finally decided that the advantage of the goodwill and sales argument on the landscape posters more than offset the advantages of the close-up illustrations.

Now that the campaign was definitely going ahead, it was necessary to decide about the technical questions involved in making the posters. While Kodachrome has certain definite advantages over the one shot camera, so far as ease of handling, speed, and the greater depth of focus obtained with the short focus lens are concerned, the fact that the finished poster would be a blowup in color to 8' 10" x 19' 8", automatically eliminated its use.

Mr. Lee Jennings, of the Schmidt Lithograph Company, came down from San Francisco and explained their process of reproducing the posters, and also the reasons for density, contrast and gamma of the type of print and separation negatives they would need.

THE method of reproducing the posters is an application of the Schmidt Direct Projection method. Direct projection is entirely photographic, which naturally is a great advancement over the old hand-drawn crayon process. Obviously,

"—on the Midway Point, Del Monte board we cut down several trees to make everything fit into our composition."

"—a store in Long Beach used the Monterey poster and the beach scene for backgrounds in their show windows."

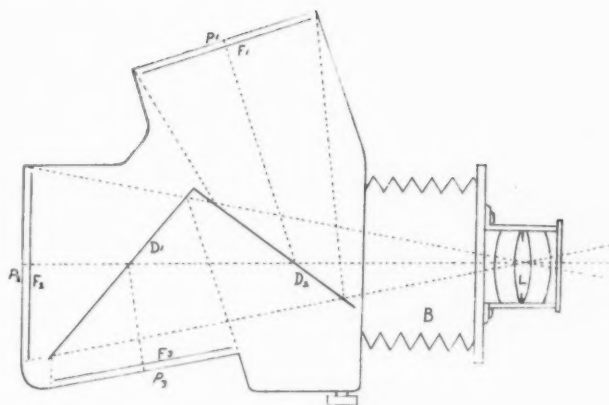


it would be almost impossible to reproduce a color photograph by the old hand-drawn crayon process, and retain its photographic quality.

On receiving our color print and separation negatives, the men from Schmidt Lithograph make photographic positives on glass from the separation negatives. The color print is used as a color guide, although occasionally they make separation negatives from it, in order to supplement the original separation negatives we deliver them. Any retouching which is necessary is done on the glass positives. Then, from the positives, the lithographer makes 200 line screen negatives. These negatives are projected through a very large projection printer, equipped with condenser lenses, onto sensitized zinc plates. These plates are developed and etched, and are then ready for the presses. This large projector is a very interesting machine. It is set on a heavy base, similar to a lathe bed. The light source consists of a series of rotating high voltage arc lamps. (Page 22.) The poster is not projected full size onto one large plate, but is divided into 8 full sheets and 4 half sheets (pp. 22-23). So the plate making and printing must be "on the head" since, when these sheets are assembled on a board, they must match for color and density.

In regard to the photographic technique, we use a Nicol-Pratt 5 x 7 color camera. It is a two mirror camera, shooting three negatives at once. The following sketch is ap-

This is approximately what happens inside the color camera in making an exposure: Light entering Lens L passes through dividing devices D1, D2, then through Filter F2 and forms image on plate or film at P2. Light entering Lens L is reflected off divider D2, passes through Filter F1 and forms image on plate or film P1. Light entering Lens L passes through divider D2, is reflected off divider D1, passes through Filter F3 and forms image on plate or film P3. Dividers and filters are so arranged that identical images are formed on all three plates or films, both with regard to size and exposure. Each filter gives a sharp cut of required portion of spectrum. The filters are blue, red and green. The resulting negatives are known as the yellow printer, the blue printer and the red printer.



proximately the way the camera works. (See above.)

The filters are blue, red and green. Consecutively the resulting negatives are known as the yellow printer, the blue printer and the red printer. From these negatives we make a twenty-inch carbro print. The print is flowed with a celluloid compound, which makes it possible for the layout artist to letter on the print itself, so that when the print is sent to the lithographer, it is a finished poster, just as it will appear on the boards.

Although our lens equipment had been and was satisfactory, to make doubly sure of critical sharpness we ordered a 12-inch F.9 Apo Tessar lens. From our tests and the use we have made of this lens, I cannot recommend it too highly. It certain-

ly is a beautiful piece of glass. We also rebuilt our projection printer in order to get the maximum amount of definition. And in all our shots we stopped to F.32. As you know, poster colors are seldom found in nature. To give our landscapes the brilliance and "punch" we needed, we had new filters made, to give us a stronger cut and so increase the brilliance of the colors. In making the prints, it was necessary to push the carbro technique around considerably, in order to get as much body, and at the same time as much brilliance, as we desired in our prints.

Making a list of locations to be photographed was no small item, since the locations had to be in the western states, and had to have a definite tourist attraction. It was also necessary that the photographs

"—the Golden Lion Cocktail Lounge in San Diego used reproductions of the posters for murals. Automobile dealers have used them for their showrooms."



"—at first the car was hidden from view because of the snow banked up on the sides."



of the locations appear on the boards at the right time. This meant we must photograph locations at least two months before that time. For example, a photograph of the desert or a ski scene in Yosemite would look very much out of place appearing on the boards in July or August. Also, the choice of locations was limited to places which could be photographed. While there are any number of beautiful landscapes in the western states, the locations to be used had to be simple in composition, had to have as much natural strong color as possible, and had to be so situated that a car could be driven into the picture. And if possible, it was necessary also to use scenes which would be recognizable to the public.

Mr. Freeman made a rough sketch of the first poster, which was to be a desert shot, with a car and a Joshua tree in the foreground, and a mountain in the far background.

We spent a day or two checking locations around the Mojave Desert, but were not satisfied with those we found. We finally decided that a Sahuaro Cactus would be a more interesting shape than a Joshua tree. To get a Sahuaro Cactus, it was necessary to go to Arizona. We went to Phoenix, where we arranged with the Buick distributor to use a new Buick phaeton. The first day we spent in looking for a location. While there were any number of cacti, they didn't seem to grow exactly in the right places, so far as we were concerned. We wanted to use a low angle, and in most spots the sage brush grew rather high. Toward the end of the afternoon we came upon a large field which had been entirely cleared of sage-brush and other desert plants, except that in the center stood a beautiful Sahuaro Cactus. We drove onto the field with the car and got out our cameras, and I checked the location. For checking locations, I use a 4 x 5 Graflex. The ground glass is matted off in the proportions of the poster.

Fortunately, about five miles away was Superstition Mountain. The location almost matched the sketch. We set up the color camera

and got the car into position and made a test shot, which would be developed that night in the bathtub at the hotel, to check our register, light, and things in general. I made a rough sketch, indicating the time, the location of the sun, how many models I would need, and we drove on to see if we could find any better locations. We didn't.

This procedure was followed for practically all the posters we made. However, in most of the other locations we did not follow a sketch.

THE following morning we were on the set before sunrise. We photographed it in early morning light, at noon and late afternoon. The early morning light was really the best. But I have found it is always wise to watch a set throughout a whole day, since you may think you have the best light, but can't be sure until you have seen the set in other lights.

After each day's shooting a test set of negatives must be developed, in order to check the register in the camera, the exposure, and the numerous variables which one has to contend with in photography. The developed test set of negatives also gives us a feeling of security between the time we leave a location and arrive back in Los Angeles. If the test negatives are all right, we are pretty sure we have the shot in the bag.

This procedure was carried out on all our trips. However, a few things happened which might be of interest. On the Boulder Dam trip, we were dubious as to how we could fit the tall, rather narrow shape of the dam into the horizontal format of a 24-sheet, which on a 5 x 7 negative is about $2\frac{1}{2}$ " x 7". We finally found one place from which to photograph it. Our camera was placed on a high rock which jutted out over the side of the canyon. It was necessary to wire the tripod on the rock, since the wind blew so strongly.

On the Midway Point, Del Monte board we had to cut down several small trees and run the car out over the edge of the road to make everything fit into our composition.

In Yosemite, in order to show at

a glance that the picture was made in Yosemite, it was almost imperative that we feature Half Dome. Now, if you have ever been in the Yosemite Valley and tried to make pictures of the valley floor, and also include Half Dome, you will understand our problem, since we were forced to work with a 12-inch lens on about half of a 5 x 7 plate, and make a horizontal picture. To add to our worries, there were about four and a half feet of snow on the valley floor, and we had to have a car in the picture.

After a lot of hiking over soft snow, we found a location at the far end of the valley without trees in the immediate foreground, and which had a road opened through the snow. However, we still had some work to do, since with the camera on the snow, most of Half Dome was sticking out of our picture, and the car was hidden from view, because of the snow which was banked up on the sides of the road.

We first dug a hole about three and a half feet deep and put the camera into it, grading the snow away from the hole. Then we blocked the car up on the road so that it would be above the snow banks. We arranged our models and snapped the shutter. I certainly would have enjoyed having along some of those artists who cry "You photographers have such an easy time—all you do is snap the shutter."

The shot I like best is the one we made in Washington. When we left Los Angeles, the idea was to photograph Mt. Rainier, so we took a train to Seattle. Arriving in Seattle, we started out by automobile to find a suitable location from which to photograph the mountain. Due to the fact that we must work two months in advance, it was necessary to get the Rainier shot in early June. This year, it seems, the snow was exceptionally heavy. Also, since the poster would run in the middle of the summer, it was imperative that the foreground of the photograph have no snow in it. We drove up and down and all around Mt.

(Turn to page 49)

THE PHOTO-LITHOGRAPHER

-- only after the winter campaign, 1868



Indians, after capturing Union Pacific Freight Train, from drawing in Frank Leslie's Illustrated Weekly.

Custer surprising an Indian Camp on Washita River, from a drawing by J. E. Taylor.

In autumn of 1867, the Taylor Commission (finally aroused by reports of warfare by the Indians) met the tribal chiefs and their warriors at Medicine Creek Lodge . . . entered into a new treaty, but it did not bring the expected peace. Destruction of lives and property by the Indians continued. October 9, 1868, Major Gen. P. H. Sheridan called for volunteers to serve for six months against the hostile tribes to bring them into the reservations.

It was an arduous campaign through the winter, without adequate camp equipment, and the commissariat being exhausted most of the time. After Custer took Chief Black Kettle's village, the Indians were in retreat—the various chiefs began to surrender, white captives were returned. From January 1869, there was little trouble with the Indians in this territory—they re-

Hostile redskins from five tribes in 1866-67 roved through the Kansas country—attacking Dodge and Larned—raiding the settlers in the Arkansas River, Smoky Hill, Solomon and Republican Valleys—preventing the construction of railroads, after having received arms, food and clothing in Indian Territory from the Government.



mained on their reservations in peace (with the exception of a few attacks, such as the Cheyenne raids of 1878)—a peace which might have been attained years before had the Middle Western settlers not been handicapped by mistaken sentiments in the East for the Indians, and the fact that the Indian Bureau was a plaything of politicians for many years.

No. 6 in an Historical Series of the Middle West

Lithographed by
Saml Dodsworth Stationery Company
Kansas City, Missouri.

One of a series of direct-mail pieces in an historical series tracing the growth of the Middle West.

New Developments in Plate Making

BEFORE the offset press was applied to printing on paper in the lithographic industry, all work was drawn on stone by hand with lithographic crayons, or the hand process of stippling dots to represent various colors. Then when editions were printed from lithographic stones or metal plates, the hand transfer process was used where ink impressions were pulled from the original drawings upon rice paper coated with starch solution. Layouts were made to represent the sheet to be printed on the press, and duplicates of the original in the required number were placed as needed on the press plate. This hand transfer process enabled the lithographer to speed up the output of the press editions by printing from duplicates assembled on the press plates or stones. Just before the offset press was introduced in the lithographic industry, experiments were being made with prints on gelatine coated stones by methods very similar to the Collotype process.

However, the fine texture on the original prints made on gelatine coated stones defied successful hand transfer methods. It was this failure of the hand transfer process to produce satisfactory images on the press plates that caused the design of the first photo-composing machine, to produce original images photographed in register directly on the sensitized press plates or stones.

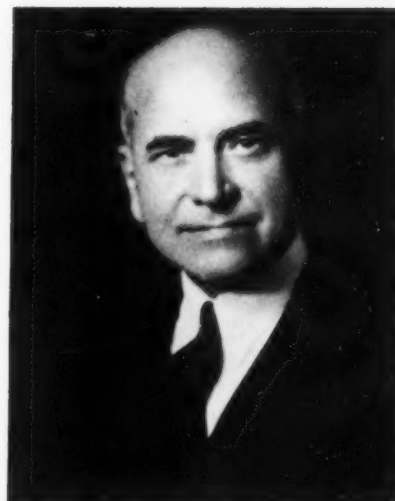
It would be well at this point to define just what is meant by a photo-composing machine. First of all, a sheet is printed from all origi-

nal photographic prints placed in predetermined location and position on the press plate. These original photographic images have made possible the fine quality of photo-process offset work, and have contributed to the growth of the offset industry.

The term "photo-composing" has been challenged as a misnomer, but for the want of a better name I submit that when two or more different images are placed in predetermined locations and positions on a press plate, the operator resorts to photo-composing. Whether the image is an illustration or two different characters of type makes no difference in the broad sense. In any event photo-composing of two or more images on the same plate is different than the step-and-repeat term applied to photo-composing. In a true step-and-repeat job only one image appears on the sheet and is stepped-and-repeated as required by the order. Photo imposing implies the imposition of images by hand on the required form which makes up the press plate.

The photo-composing machine has made it possible to use any variety of photo-mechanical processes by placing the original images on the press plate from which the edition is printed, and which results in a superior quality of work printed by the offset method, as compared to hand transfer, electrotypes, stereotype, or other duplicating methods employed for press editions.

The offset press of today has been developed to such an extent that not only does it produce a greater volume of work, but a greater variety of products as well. As an example, take a direct-color photograph reproduction printed in four colors on



By W. C. HUEBNER*

Director, Huebner Laboratories

offset stock. Then take the same subject printed on coated stock. Note the difference. The coated sheet shows the subject in sharper and brighter colors as compared to the offset sheet, but both were printed from the same press.

In a true photo-composed result, all of the images are different. Some are composed in exact register inside the border or frames, which frame is exposed from one set of negatives around five different color subjects to an accuracy of plus or minus .001" of the required location indicated on a layout sheet.

In preparing work which is to be printed from a photo-composed press plate, such as a bottle-cap subject printed on tin for example, the image is stepped up and repeated on a glass plate to produce what is known as a group negative, and the group is then exposed directly to the press plate with about four exposures to speed up the production of the press plate. These operations are repeated for all of the colors used. As another example, take an offset color print on cotton cloth. The color values can be retained during the printing down to the minutest detail. Matter which can be read with only a magnifying glass will be clear and sharp.

Offset printing is at present being applied in the reproduction of

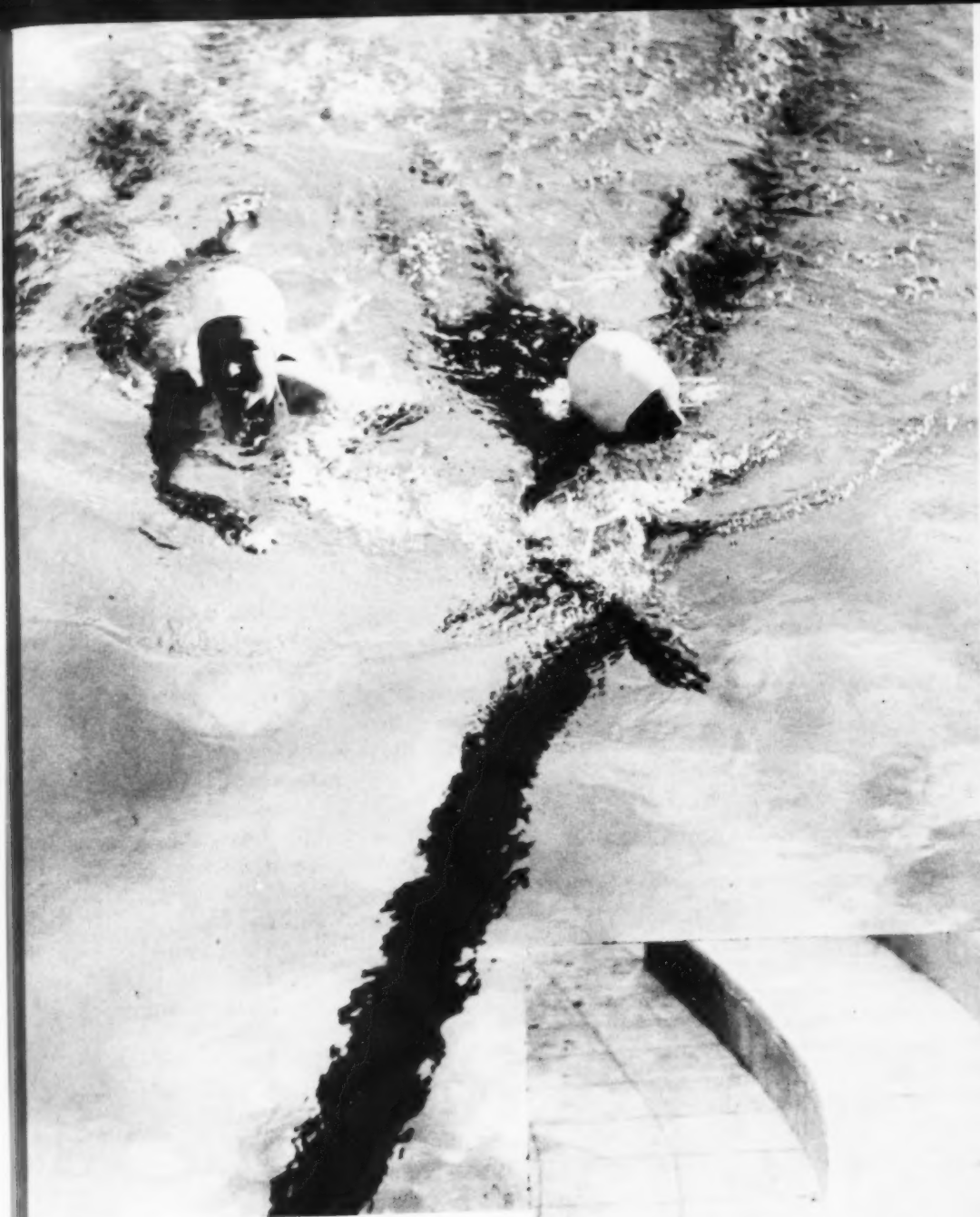
(Turn to page 43)

* Delivered at the Alumni Reunion and Advisory Council Meeting on College Education in the Graphic Arts, Department of Printing, Carnegie Institute of Technology, Pittsburgh, Feb. 17 and 18.



● Ullrich E. Meisel, New York photographer, whose work is shown on these pages, has just recently completed a series of outdoor color shots for direct color window and counter displays. He is at present at work on the photographs for a sporting goods catalog which will be lithographed. His specialty, as those who have used his work will tell, and as these two pages indicate, is outdoor work, and the more difficult and trying the conditions the better. His work is much in demand by New York department stores. Next month *Life* will carry one of his most recent photographs on its cover.

THE PHOTO-LITHOGRAPHER



Pageant of the Pacific

(from page 15)

plates. Practically all of the West Coast lithographers expect a substantial amount of Exposition business from exhibitors and concessionaires, with the peak due in the early summer.

OF course it is lamentable, especially to an impartial prejudiced reporter like myself who was born and brought up in the Graphic Arts (particularly lithography!), that very few of the 142,497 visitors who crowded to the Golden Gate International Exposition on the opening day stopped to realize what a tremendous part the Graphic Arts played in bringing them there. Most of the 20,000,000 persons who will visit the Fair this year will take for granted (but not with a grain of salt!) the beautiful lithographed Guide Book, the souvenir tickets, the post cards, the view books, etc. Yet, anonymous or not, lithographers out here are going to benefit during the next ten months. If the Graphic Arts industry has played a major part in selling the 1939 Golden Gate Exposition, in turn, it looks as though the Exposition will give the lithographing and printing industries a great opportunity to plan for an expanded sales program. Already those lithographers who have tied in with the Exposition have realized a twenty per cent increase in business. At least another twenty per cent is looked for by the industries when the exhibitors get into full swing and San Francisco is enjoying its tourist season between May and October.

Approximately thirty-two pieces of official Exposition material have been produced to date. Some of the material is in as many as four languages. The Fair has no total appropriation for printing, expenditures being based on quarterly budget allocations. Schmidt Lithograph Co. produced the official poster, which is in six colors, two sizes, from drawings submitted by leading San Francisco artists. In addition to Schmidt and Crocker-Union, others who have, or are producing promotional material are:

Knight-Counihan, Invitational Brochure to Foreign Countries. This comes in 12 pages and cover, 9 x 12 format. Printed in four languages, these brochures were designed, written, pictures selected, translations made, printed and bound and delivered in 4½ days. Knight-Counihan maintains an Exposition Department at the Fair. A lithographed mailing piece has been issued to business men inviting them to "Make Knight-Counihan's Exposition Department Your Fair Staff." Austin Shecan of the company, who was on leave of absence from his firm for two years in preparation for the work, is in charge of the department.

This company is also getting out *World's Fair Progress Bulletin*, which contains 16 pages, 14½ x 11, two colors throughout. It is issued to prospective exhibitors and concessionaires, describing the progress and scope of the Exposition.

Schwabacher-Frey, *World's Fair Facts*. This is an insert folder, 6 x 3½, six pages, one color.

Borden Printing Co., Official Exposition Brochure. This, in two colors throughout, 11 x 13, 30 pages, with a special four-color eight-page section describes the "Pageant of the Pacific" in English and Spanish.

Sunset Press, four-page letterhead, four colors inside, one color outside. Inside is a lithographed playland map of the Bay Area done in cartographic style by Francis DeFoy. These have been sold to various business firms who have their own letterhead printed on the first page of the folder.

WITH the double object of promoting the Fair and increasing their own business through the build-up years preceding the opening of the Fair, lithographers have been alert to opportunities to stimulate new business or enlarge an existing order by persuading customers to work into their own promotional material the Exposition motif. This usually meant the addition of another color or extra composition. These tie-ins, it is estimated, have accounted for at least a 20 per cent increase in business during the year.

An interesting example of promotional material tied-in with the Exposition is the handsome 24 page booklet lithographed by Knight-Counihan for the Pacific Gas and Electric Co., which installed the \$1,500,000 illumination plant for the Fair. The latter company, by the way, made dramatic use of the new fluorescent lighting tube the night preceding the opening when, immediately following a magnificent pyrotechnical display, Treasure Island was flooded with colored light.

A special day has been set aside at the Fair for the Graphic Arts on June 10. Exhibits of lithography, printing and the allied crafts, and a get-together of Graphic Arts craftsmen from all over the West will be held. Details have not been completed, but lithographers and printers are busily planning for it. Also, Pacific Coast Advertising clubs are planning an exhibition in which the Graphic Arts will be very much in evidence on June 20.

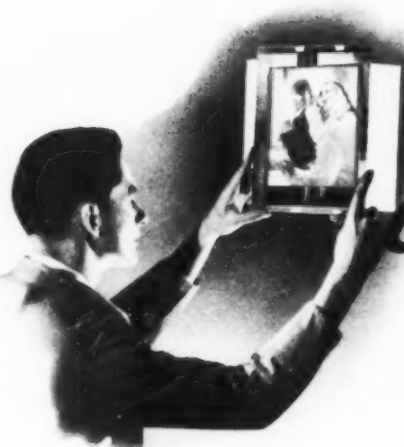
In the meantime, you will probably be interested in knowing that so far the Golden Gate Exposition has drawn a larger attendance than did the Century of Progress in the same number of days, and the "foot ease stations" are doing a land office business. These "stations" are brightly painted little huts dispensing special ten-minute massages and electric vibration treatments for aching feet.

How's the "World of Tomorrow" coming along?

New Class Completes Course

Another class of twelve students finished the course in offset presswork at the Chicago School of Printing and Lithography Feb. 10. Since lithographic courses were added to the school's curriculum two years ago, approximately 100 students a year have received certificates showing completion of the prescribed work. Two courses are being offered at present in the lithographing department. Under I. H. Sayre, training is given in camera operation and plate making, while under W. A. Stevens training is being offered in offset presswork.

THE PHOTO-LITHOGRAPHER



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Sizes 26 x 34 to 30 x 40 are supplied on 3/16-inch glass. Sizes 16 x 20 to 24 x 31 also will be furnished, on special order, on 3/16-inch glass without additional cost. There is a slight extra charge for sizes 8 x 10 to 14 x 17 on 3/16-inch glass.

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FOUNTEX N. D. is a new kind of press water fountain solution that keeps the plate in perfect condition while running and seals it against oxidation during press stoppage.

No gumming of the plate is required during press shut-down even for lengthy periods.

FOUNTEX N. D. contains no glycerine or other

ingredient that will soften the ink or retard its drying on the job.

Think what it means to you not to have to gum the plate every time you stop the press or for noon or night shutdown.

FOUNTEX N. D. is recommended for use on Multilith and Webendorfer Offset Job presses. Harmless to all press parts and plates.

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Canada: Canada Printing Ink Co., Ltd.

In and About the Trade

Form New Milwaukee Group

Photo-offset lithographers of Milwaukee have recently organized an association in that city under the name, Association of Photo-Lithographers. The following officers and charter members have been elected:

Herbert F. Johnson, Dosie-Johnson Co., president; William A. Krueger, Jr., W. A. Krueger Co., vice president; Norman R. Hanson, Technicraft Co., secretary-treasurer; Roger F. Owsley, R & L Corp.; Lewis A. Weiss, Mandel Multitone Co.; and R. K. Smith, associate secretary.

The organization has drawn up a constitution and by-laws and announces its aims and purposes to be: adoption of various competitive standards; promotion and protection of the general welfare of the industry and its members; encouragement of the greater use of photo-lithography; the study, compilation and dissemination of costs and information relative to methods of conducting business; and cooperation with similar organizations within the Graphic Arts.

Forms Zerbo, Inc.

V. J. Zerbo, Jr., former vice president and director of art, Polygraphic Co. of America, New York, has formed his own lithographing company, Zerbo, Inc., at 32 Union Square, New York. The company will design and manufacture sales promotion material, specializing in window displays and counter cards.

Carnegie Conference

Approximately 300 attended the Printing Alumni Reunion and conference on College Education in the Graphic Arts, sponsored by the Department of Printing at Carnegie Institute of Technology, Pittsburgh, last month. In the two-day session, lectures on the Graphic Arts and discussions on the possibilities of

organizing a professional group to act as an Advisory Council on College Education in the Graphic Arts were heard. Eighteen representatives of as many national graphic arts associations were on hand for the meetings.

Among the speakers were William C. Huebner, Huebner Laboratories, New York, who talked on "New Developments in Plate Making" (see page 27); Harry L. Gage, vice president in charge of sales, Mergenthaler Linotype Co., whose subject was "Progress in Graphic Arts Education"; Dr. Webster N. Jones, Carnegie Institute of Technology, who talked on "Advancement of College Education in the Graphic Arts"; Elmer J. Koch, secretary of the United Typothetae, whose subject was "Cost Finding"; and J.

Raymond Tiffany, general counsel, Book Manufacturers Institute, who spoke on "Industrial Cooperation." Clinics on major problems of the Graphic Arts were held Saturday morning and afternoon.

To Occupy New Plant May 1

Work is progressing rapidly on the building at Twenty-First and Locust Streets, St. Louis, recently acquired by John S. Swift, Inc., planographers, and the concern is expected to be doing business there about May 1. The red stone exterior has been cleaned and the interior is being completely remodeled and repaired. The building at one time housed the plant of the Lambert, Deacon & Hull Printing Co., now out of business. The Swift company is now located at Ninth and Walnut streets.

Emmett W. Rutledge, 48, account executive, Central Outdoor Advertising Co., died last month.

CARNEGIE DEPARTMENT OF PRINTING ADVISORY COUNCIL REPRESENTATIVES AND GUESTS

Seated, left to right: Fred J. Hartman, National Graphic Arts Education Guild; L. M. Augustine, International Association of Printing House Craftsmen; Glen U. Cleaton, Department of Printing, Carnegie Institute of Technology; Harry L. Gage, National Printing Equipment Association; Fred W. Danner, Advertising Typographers of America. Standing, left to right: Craig R. Spicher, Director of Education, Miehle Printing Press and Mfg. Co.; John G. Strange, Institute of Paper Chemistry; John T. Fuhrman Jr., International Trade Composition Association; William C. Huebner, American Society of Mechanical Engineers; William J. McFarlin, Young Executives of Graphic Arts; O. Alfred Dickman, American Institute of Graphic Arts; C. R. Conquergood, National Association of Printing Ink Makers; George A. Preucil, National Gravure Printers Association; William T. Dieffenbach, National Association of Printing Ink Makers; D. J. MacDonald, Lithographic Technical Foundation; John Ellison, National Assoc. Printing Ink Makers; Wm. P. Gregg, Lewis Roberts, Inc.; Paul A. Bennett, Mergenthaler Linotype Co.; Elmer J. Koch, United Typothetae of America; Walter E. Soderstrom, National Association Photo-Lithographers; S. E. Haigh, Lanston Monotype Co.



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Wausau Quartz Graining Sand

Agsco Silica Graining Sand

Agsco-Crystolon Grain

Agsco Graining Grit

Pumice

Wooden-Balls

Steel Graining Balls

Glass Marbles

BALLS



AMERICAN GRADED SAND CO.

2512-18 GREENVIEW AVENUE

CHICAGO, ILLINOIS

Exposition Sends Invitations

Letters inviting their participation in the Fifth Educational Graphic Arts Exposition to be held at the Grand Central Palace, New York,



FRED HOCH

Sept. 25 to Oct. 7, inclusive, were mailed last month by Graphic Arts Expositions, Inc., to leading manufacturers of printing machinery and supplies throughout the country. Floor plans were inclosed, as were the regulations governing the Exposition, which is expected to comprise the most complete display ever held in the United States of the machines and materials used in the Graphic Arts Industries.

Up to the time of issuing the letters it was announced that requests for space for more than 75 per cent of the first floor and a number of booths on the mezzanine floor had already been received. Assignment of space locations began on March 1.

Fred Hoch, manager of the Exposition, has announced the appointment of Phil H. Stitt as director in charge of publicity. Mr. Stitt was formerly in charge of publicity and promotion for the New York Employing Printers' Association. He has resigned that position to take over his new duties.

N. Y. Assn. Meets in Newark

The New York Photo-Lithographers' Association held its 2nd

MARCH 1939

Annual Dinner and Meeting at the Tavern, Elizabeth, N. J., last month. Among the speakers were Fred A. Hacker, manager of the New Products Division, American Type Founders, who talked on "Spraying Printed Sheets," as it pertains, particularly, to the lithographic process; Hugh Brower, Maxwell Paper Co., who discussed "Developments in Offset Papers"; and Albert Victor Ellis, whose subject was, "In What Direction Will Photo Offset Go?"

Progressive Moves

Progressive Photo Offset Co., formerly at 108 Fulton St., New York, has moved to 124 White St.

Appoints Civic Committee

Henry G. Keeler, president of Keeler-Murray Printing Co., St. Louis offset concern, and chairman of the publicity and advertising committee of the St. Louis Chamber of Commerce, has appointed a committee of sixty business and professional men and women to assist in the task of publicizing that city to the nation.



"He wants to know if we can coupon his 24-sheet posters."

by courtesy of Tide Magazine

Young Lithographers Elect

W. Stuart Powers, of Ketterlinus Litho Mfg. Co., was elected president of the Young Lithographers Association of New York at the annual election of officers held at the Hotel Dryden, New York, March 1. He succeeds John L. Kronenberg, United States Printing and Lithograph Co. Alfred B. Rode Jr., of Rode & Brand was named vice president, Sidney Voice of Consolidated Lithographing Corp., secretary, and Norman Bernhardt of Sweeny Lithograph Co., treasurer.

Named to the board of governors, in addition to Mr. Powers, were George Schlegel 3d, of Schlegel Lithographing Corp., Fulton MacArthur of Reynolds Metal Co., Alfred Soman Jr., of National Process Co., William Winship of General Printing Ink Corp., Charles Roberts of Brett Lithographing Co., and Munroe Selling of Zeese-Wilkinson Co.

Analyzes House Organs

Oliver Buswell, McCormick-Armstrong Co., Wichita, Kansas, writes in the January issue of the *National Printer Journalist* on "What Makes House Organs Click?" Predominant deficiencies of house magazines, as reflected in a survey conducted by Mr. Buswell's company, were in (1) attention value, (2) reader interest, (3) timeliness, (4) typography, (5) illustration, and (6) cover design.

Robbins Joins Consolidated

Ben Robbins, former president of Art Process Displays, Inc., New York, is now associated with Consolidated Lithographing Corp., Brooklyn, as a creative sales executive.

Hear Donaldson

D. C. Donaldson, of the Graphic Arts Division of Eastman Kodak Co., Rochester, addressed the Chicago Club of Printing House Craftsmen last month on "Kodachrome in the Printing Arts."



.. for *Pease* Photographic Arc Lamps

FIELD CONTACTS

In fact it is your needs that largely activate our Planning Group, shown above. To learn about your requirements our salesmen, servicemen and special contact men regularly call on hundreds of lamp users in various fields and report their findings to this Planning Group.

RESEARCH

In addition, trained research men in our laboratory keep a check on the swift technical developments of today, recommending to our Planning Group everything which can be used to improve light intensity, light distribution, or to cut operating costs.

EXPERIENCE

Our Engineering Department, in close cooperation with the Planning Group, translates into practical equipment the ideas from field contacts, research and the thirty years of experience we have had in building arc lamps.

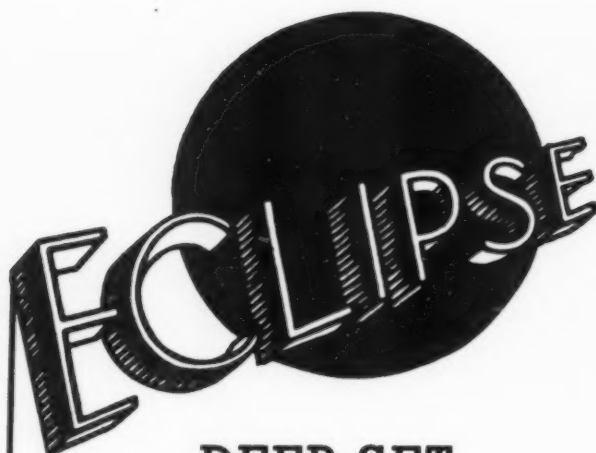
RESULTS

To you as a photographic arc lamp user, the functioning of the Pease Planning Group means equipment that improves the quality of negatives and prints, at the same time reducing cost. In other words, our Planning Group really means more business and profit for you.

Perhaps we can serve you by helping solve some of your lighting problems. We would welcome the opportunity. Write us even if you only want literature — there is no obligation whatsoever.

The Pease Planning Group shown above . . . from Left to Right: H. J. Brunk, Chief Engineer; Thomas Lord, President; K. N. Nirison, Superintendent; W. E. Pashley, Vice President; A. F. Jacobs, Assistant Sales Manager.

THE C. F. PEASE COMPANY
2609 West Irving Park Road
Chicago, Illinois



DEEP-SET

BLACK



It is only
"GOOD BUSINESS"
to dress-up your
customer's job
by using this
widely accepted
ALL-PURPOSE
BLACK

Gaetjens, Berger & Wirth, Inc.

35 York St., Gair Bldg., Brooklyn, N. Y.

538 South Clark St., Chicago, Ill.



Strathmore Staple Papers

Strathmore Paper Co., West Springfield, Mass., has launched a promotion campaign for the "Strathmore Family" of staple papers. The theme of the campaign is based on famous characters in history. The "Text" staple stock is represented by Benjamin Franklin typifying the practical printer, while the line of "Cover" stock is represented by George Washington symbolizing stability and distinction. Strathmore "Bond" is symbolized by John Hancock and Strathmore's "Fairfield" is represented by Dolly Madison to symbolize beauty, fashion and dependability. The idea back of the promotion campaign is, of course, to inform the trade of the different characteristics and purposes of the company's line of staple papers. A feature of the campaign is the "Strathmore Theatre," a miniature stage, equipped with floodlights and footlights over which parade colored cards and exhibits for the inspection of the dealer. A mailing reporting current news on staple papers is issued regularly. Copies available.

Warns Against Price Cutting

A warning to printers to steer clear of selling below cost was made recently by the Associated Printers

& Lithographers of St. Louis, in a bulletin to members. It was pointed out that volume gained by price-cutting is not a healthy gain, and that the printer indulging in such practice to fill up his own slack periods often runs into his own cut prices later on.

Talks on Typography

Howard N. King, typographic counselor for Intertype Corp., spoke on "Dramatized Typography" at the February dinner meeting of the St. Louis Club of Printing House Craftsmen. The effective use of inks in offset and letterpress production is announced as the topic for the March session, with several experts in this field promised as speakers.

Stecher-Traung Net Lower

Stecher-Traung Lithograph Corp. reports a net income for 1938 of \$111,601, equal, after preferred dividends, to 4 cents each on 178,148 shares of common stock. This compares with \$426,189, or \$1.80 a common share in the previous year.

Cook Joins Nivison-Weiskopf

Ray Cook has joined the Chicago office of Nivison-Weiskopf Co., Cincinnati, as art director.

Speaks at Paper Convention

Homer J. Buckley, president of Buckley, Dement & Co., offset lithographers, Chicago, spoke at the National Paper Trade Association Convention held in New York, last month. Mr. Buckley discussed the need for sales training in the paper trade and the industry's recently developed program to meet this need.

Chromatone Process Explained

Defender Trade Bulletin, house magazine published by Defender Photo Supply Co., Rochester, N. Y., contains an article on the Chromatone Process in the January-February issue, as well as the usual miscellaneous collection of trade tips and news.

Mineral Oils for Ink

The use of mineral oil in the manufacture of printing and lithographic inks is discussed in an article in a recent issue of *Our Sun*, house organ of Sun Oil Co. It is pointed out that mineral oil may be used advantageously to some extent in the preparation of litho-varnish vehicles intended for use on paper stocks capable of effecting some degree of drying by penetration.

Hold Blanket Discussion

The Lithographers' Club of Chicago held a roundtable discussion on blankets at the Feb. 24 meeting. With President Frank C. Hohegger, Curt Teich & Co., presiding, representatives of blanket and roller manufacturers, as well as the regular members, joined the discussion.

Recent Harris Press Sales

Harris-Seybold-Potter Co., Cleveland, reports the following recent offset press sales:

Reserve Litho, Cleveland, 42 x 58 single-color press; Continental Lithograph, also of Cleveland, 42 x 58 single-color press; Ketterlinus Litho Mfg. Co., Philadelphia, two 42 x 58 two-color presses; Provi-

FOR OVER FORTY YEARS

SUPPLY HEADQUARTERS

MOLLETON-FLANNEL RUBBER BLANKETS

SEWN MOLLETON AND FLANNEL COVERS

SEAMLESS MOLLETON AND FLANNEL COVERS

SEAMLESS FOUNTAIN ROLLER COVERS

LEATHER ROLLERS

HAND ROLLERS

SCRAPER LEATHER

ROBERTS & PORTER

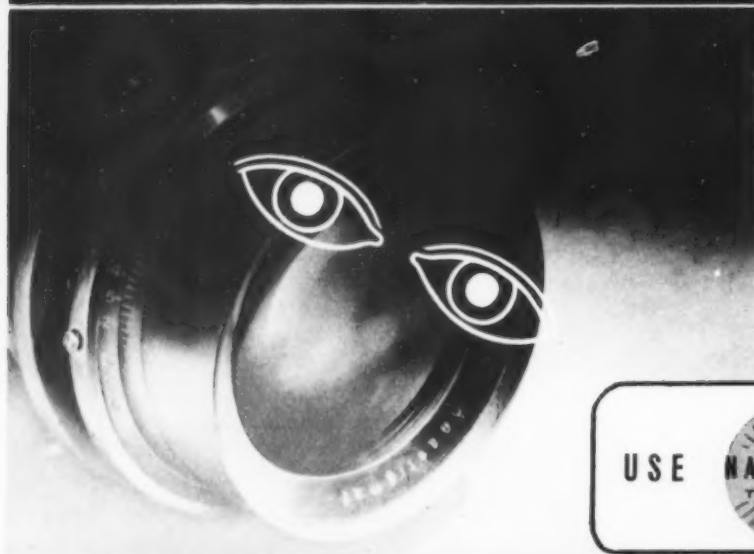
I N C O R P O R A T E D

New York: 100 Lafayette Street
Phone: CAnal 6-1646

Chicago: 402 S. Market Street
Phone: WABash 6935

Canadian Agent: Canadian Fine Color Co., 240 Logan Ave., Toronto

The *Camera* must see it or the customer will not



The lithographer's camera "sees" by means of the light reflected from the copy through its lens. If the source of illumination is lacking in certain colors, the camera cannot properly see and record those colors from the copy. The result is inaccurate reproduction — faulty tone gradation in monochrome and unnatural hues in color reproductions.


"National" Photographic Carbons provide light containing all the spectral colors in natural, daylight balance. They enable the lithographer to reproduce his customer's copy with the fidelity that insures satisfaction.

USE



PHOTOGRAPHIC CARBONS

NATIONAL CARBON COMPANY, INC.

Unit of Union Carbide  and Carbon Corporation
Carbon Sales Division: Cleveland, Ohio
General Offices: 30 East 42nd Street, New York, N. Y.
Branch Offices: New York, Pittsburgh, Chicago, San Francisco

dence Lithograph Co., Providence, R. I., one 42 x 58 two-color and two 35 x 45 two-color presses; McCandlish Litho, Philadelphia, one single-color and one two-color 46 x 68 presses; Reynolds & Reynolds, Dayton, O., one 26 x 40 and one 42 x 58 single-color presses.

Also, John Dickinson Schneider, New York, 26 x 40 single-color press; Eureka Specialty Printing Co., Scranton, Pa., 42 x 58 single-color; Keeler Murray, St. Louis, 35 x 45 single-color; Emerson Press, Pittsburgh, 35 x 45 single-color; R. R. Heywood Co., New York, 26 x 40 two-color press; K-B Printing Co., Omaha, 22 x 34 press; Stearns and Beale, New York, 22 x 34 press; Ralph Printing Co., Omaha, 22 x 34 press.

In addition to these, 21 x 28 presses were sold to Missourian Printing, Cape Girardeau, Mo., Bankers and Merchants Co., Kansas City, Allegheny Litho, Pittsburgh; and 17 x 22 presses to Franklin DeKleine, Lansing, Mich., Tri-Arts Litho, Cleveland, Woodbury & Co., Worcester, Mass., Lowman Hanford, Seattle, Lenzart, San Francisco, and Associated Printing and Litho, New York.

Suppliyen Hear Alaskan

The Printers Suppliyen's Guild of Chicago heard Slim Williams, famous Alaska dog musher, as the featured speaker at the regular meeting of the Guild held at the Medinah Club, Feb. 3. The Guild held its annual ladies' night at the Belmont Hotel on Feb. 25. An orchestra and two floor shows provided entertainment.

Completes Large Catalog Job

The offset department of Regensteiner Corp., Chicago, has just completed a large lithographed catalog for a concern which manufactures fishing tackle. The book is liberally illustrated with color photographs of fish and outdoor scenes. As a dealer tie-in the offset department is also producing a number of window displays illustrating sections of the catalog.

MARCH 1939

All-America Package Awards

From among 23,000 packages and displays entered in the 1938 All-America Package Competition, *Modern Packaging*, sponsor of the event, has selected sixty-four prize winners in twenty classifications. The winners have been chosen from an exhibit held in the publication's showrooms, Chanin Building, New York, through the middle of this month.

The winners cover a wide field of application, with the drug field predominating with nineteen awards, followed by the food field with fourteen. The hardware business is represented by seven winners, textile six and beverages five. Official announcement of the prize winners appears in the March issue of *Modern Packaging*. A presentation dinner, held coincidental with the 8th Annual Packaging Exposition March 7 to 10, was given at the Waldorf Astoria, March 8. Four of the awards are shown on this page.

At the top: in the Family Group, a redesign of the Snow Bird Household Utilities line. Butler Brothers, Chicago. Credited in the award are Hall Lithographing Co., Topeka, Kans., whisk broom wrapper; Charles Gilbert Phelps Co., Valatie, N. Y., polishing cloth wrapper; Carton Craftsmen, Chicago, steel wool carton; Continental Can Co., Chicago, polish wax can; Continental Can Co. and National Can Company, Chicago, polish bottle; Phoenix Metal Cap Co., Chicago, caps; Wilamr Printing Co., Chicago, label; American Can Co., New York, dance wax can; Agar Mfg. Co., Chicago, mop carton.

Second from top: in the Display Group, Birds Eye Frosted Foods full-color window display. Lithographed by the "split spectrum" process of Einson-Freeman Company, Long Island City, New York.

Third from top: in the Metal Container Group, Iso-Hydraulic Brake Fluid Cans. Chrysler Corporation.

Bottom: in the Display Group, the Mentholatum "Winter Display." Mentholatum Co., Wilmington, Del. Designed and produced by Ketterlinus Lithograph Manufacturing Co., Philadelphia, Pa.

Webendorfer Installations

Webendorfer-Wills Co., Mt. Vernon, N. Y., reports the following recent offset press installations:

Edward Stern & Co., Philadelphia, 22 x 29 press; Rite Printing Service, New York, 22 x 29 press;



SINCLAIR & CARROLL INKS MAKE FOR GOOD RESULTS

Throughout the country in hundreds of pressrooms Sinclair & Carroll inks are being chosen for their all around dependability and good color strength. These inks are supervised in their formulation and manufacture by men whose first consideration is the well being of this business. The uniformity of these inks is safeguarded for you. The Sinclair & Carroll label on your ink container is an added guarantee of good printed and lithographed results. We will welcome the opportunities you afford us to serve you constructively on your requirements.

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LOS ANGELES, CAL.: 417 E. Pico Street, Tel. Prospect 7296

NEW ORLEANS, LA.: 518 Natchez Street, Tel. Main 4481

SAN FRANCISCO, CAL.: 345 Battery Street, Tel. Garfield 5834



serving the
GRAPHIC ARTS
INDUSTRY
in the
NORTHEAST

machinery
chemicals
metals and
supplies..

ALLAN B. CROKE COMPANY, BOSTON, MASS.

Albert H. Vela Co., New York, 22 x 29 press; Naegle-Auer Printing Co., Middletown, O., 17 x 22 press; and Long Publishing Co., Philadelphia, a new offset unit to its newspaper pressroom. Jersey City Printing Co., Jersey City, N. J., it was reported, has just placed an order for a large web offset press. In addition to these, the company says that eight orders have been received from England and four orders from France for both small and large sheet-fed presses.

Chicago Concern Expands

Chicago Show Printing Co., Chicago, moved recently to new quarters at Kildare Ave. and Drummond Place, on the west side. A need for more room in which to handle increasing business is given as the reason for the change. Located now in a one-story modern factory building, the concern has more than twice the floor area than in its former location. Skylights and broad windows have also improved lighting and ventilation. The expansion program calls for gradual addition of new equipment to plant facilities, an official stated.

Chicago Show Printing Co. was founded in 1902, and is still operated by the original management but whereas its specialty in the beginning was theatre and circus printing today this represents only a small portion of annual volume. Point of sale display material, cut-outs and mounted pieces for counter, floor and window, produced by both direct and offset printing forms the major bulk of business. The company's lease on the new quarters is for ten years.

Lithographs New Horizons

New Horizons, the new 16-page publication issued by the students of the Secondary Education Dept. of the Teachers' College of Temple University, Philadelphia, is a photolithographed paper produced by Kopy Komposers, also of Philadelphia. Plans call for an expansion of the scope of *New Horizons* and acceptance of advertising in the very near future.

MARCH 1939

Irwin D. Wolf Awards

Honors were awarded in twenty-one merchandising classifications in the 8th competition for the Irwin D. Wolf Awards for distinctive merit in packaging, sponsored by the American Management Association. The display carton for Rain-suiter, designed by Martin Ullman for Leon A. Axel, Ltd., New York, was awarded the Wolf Trophy as the package of the year. All entries in the competition were on display as a featured exhibit of the 9th Packaging Exposition, held at the Astor Hotel, New York, March 7-10. Four of the awards are shown on this page.

At the top: the most effective package employing a single color. Woodbury face powder box. Used by John H. Woodbury, Inc.; designed by De Vaulchier, Blow & Wilmet, Inc.; entered by Andrew Jergens Co.; lithographed by U. S. Printing and Lithograph Company.

Second from top: the most effective packaging of a combination sales unit. Metal container for liquid wax. Used by S. Lowe & Sons Co.; entered and designed by Continental Can Company.

Third from top: the most effective shipping container from the standpoint of merchandising and construction ingenuity regardless of artistic qualities. Old Drum shipping container and counter display unit. Entered, used and designed by Calvert Distillers Corp. Labels lithographed by Gamse Lithographing Co.

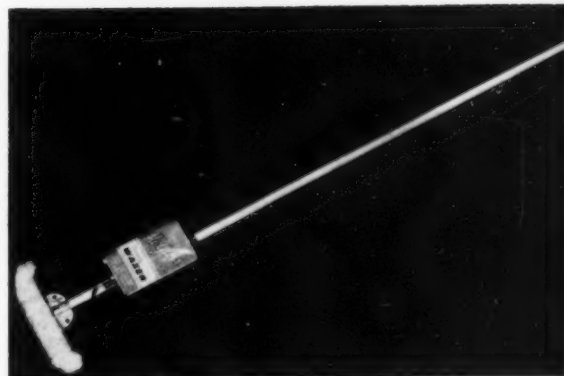
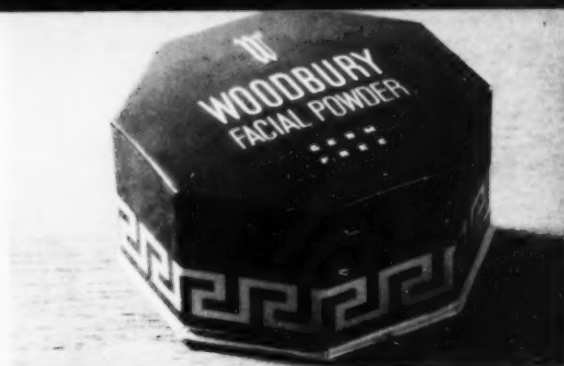
Bottom: the most effective usage of layout and decorative design, with particular emphasis on both merchandising value and beauty. Grape Gold wine bottle. Used by Quality Wine Co.; entered by Owens-Illinois Glass Co.; designed by Owens-Illinois Pacific Coast Company and Stafford Duncan.

On Caribbean Cruise

M. H. Dement, general manager, Buckley-Dement & Co., offset lithographers, Chicago, enjoyed a three weeks' Caribbean cruise which took him as far as La Guaira, Venezuela, early in February.

Expands Offset Department

James Mulligan Printing & Publishing Co., St. Louis, has enlarged its offset department by the addition of a 35 x 45 LSS Model Harris press, and the necessary camera and incidental equipment to serve this new production unit.



Counting on your INK MAN

IS something that every Lithographer is always planning on, and Siebold's inks have been first choice with many of the best lithographers throughout the country for "over half a century," because of their unvarying high quality and their excellent results.

The Foreman and Pressmen have always found SIEBOLD'S INKS flawless, to produce perfect prints sheet after sheet, day after day. With these results it means satisfied customers.

J. H. & G. B. SIEBOLD, Inc.

Printing **INKS** Lithographing
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Office
47 WATTS STREET
NEW YORK
WALKER 5-9474-5-6

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OFFSET BLACKS · COLORS · SAFETY INKS · ROLLERS
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A Sign
of High
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"Over half
a Century
of Service"

Send for
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and
Sample Books

"All our troubles are over!"



Relax! Worries of lithographer seem to melt away when ADENA OFFSET is used.

ADENA is tub-sized . . . lies flat . . . doesn't curl, AND . . . has a happy faculty of producing satisfactory results every time.

*ADENA is ready to run;
can be placed on press
direct from case or skid.*



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Chillicothé
A BUY-WORD FOR HIGH-GRADE PAPERS

Developments in Plate Making

(from page 27)

snake skin printed on a special material which is in turn mounted on a second synthetic material and used for making shoes for women, as well as handbags and similar articles. This work has been done for years by a Brooklyn concern. The next time you see a snakeskin shoe or slipper, take out your magnifying glass and look for the half-tone dots which make up the design. If it is a low-priced shoe, you will probably find the dots.

The applications of offset printing today are innumerable, from reproductions of snake skins to the reproduction of marble designs on synthetic tile. In the latter, the offset print is mounted on a base material and lacquered to give a glossy appearance to the finished product.

Many posters are now being reproduced from Kodachrome. One which came to my attention recently was reproduced from half-tone positives and dot-etched by a concern in Los Angeles. The positives were shipped to Huebner Laboratories where they were exposed by a Direct Projection System to sensitized press plates, which were developed and etched and put on the presses in Los Angeles. Four printings were made from the direct-projected plates. These press plates were not touched by hand except for developing and etching.

One reason why this poster subject was so clear and sharp in the various gradations of color was due to the use of a new light developed by General Electric Company, Nela Park Laboratories, and also to the fine uniform sensitive coatings applied to the large metal press plate, size 50 x 68, by means of the Vertical Coating Machine. In this machine the solutions are applied while the plate is rotating in a position 15° off a vertical line, and the reason superior coatings are attained by this method of sensitizing large flat metal sheets is because centrifugal action is neutralized by gravity and produces a uniform coating over the surface of the entire plate.

The light mentioned is known as a water-cooled mercury vapor lamp.

It gives off a cold steady light. There is no flicker or movement of any kind, and when the light is projected through the lenses to the sensitized press plate there is no possibility of movement on the edges of the half-tone dots, thus destroying the sizes of the dots and consequently changing the value gradations of the colors. Each dot in the shadows and in the highlights remain in a fixed position during exposure.

Entertains Camera Club

McGill Lithographing Co., Minneapolis, entertained members of the Gopher Camera Club of that city at a regular monthly meeting recently. Members of the club who availed themselves of the company's invitation report having seen one of the finest color studios in the country, together with a well-equipped black and white laboratory. The equipment and the lithographic process was explained in detail to the visitors, following which a reception was held in the tower room of the McGill plant. Mr. McGill displayed several handsome trophies offered by his company for the best prints entered in an intra-club salon.

Good Natured Maps

Farwest Lithograph and Printing Co., Seattle, Wash., has just produced a number of highly colored "good natured" maps. These maps, all in the comic vein, were prepared for the Alaska Line, suggesting some of the interesting features of Alaska to the traveler and showing some of the services offered by the steamship company. Other "good natured" maps have been designed and produced by Farwest to illustrate Oregon playgrounds.

Sponsors Lithograph Show

The Chicago headquarters of the Federal Art Project sponsored an exhibition of color lithographs in that city during January and February. Technical accomplishments in methods of reproduction were stressed.

Annual of Advertising Art

The 17th Art Directors Annual of Advertising Art was published last month. Issued for the first time with the imprint of Longmans, Green & Co., New York, the new annual, designed and laid out by Lester Beall, should appeal to everyone in the graphic arts field. It is divided into six sections, five of which correspond to the five major kinds of advertising media, and the sixth of which is devoted to typography and layout.

Into these six sections the 340 illustrations from the Art Directors Show held in New York, Chicago and Philadelphia in the Spring of 1938 are grouped. Each section begins with an explanation and discussion, by an authority, of the aims and purposes of the artwork included therein; and at the end of each section, excepting that on posters and booklets, the finished advertisements in which the illustrations were used are reproduced in miniature. The annual records and summarizes the best commercial art of the year, useful alike to student, artist and executive. Priced at \$5.

Issues Advertising Guide

National Better Business Bureau, Inc., published a book last month designated as "A Guide to National Advertising," intended to assist advertisers working under the Wheeler-Lea and the Federal Food, Drug and Cosmetic Act. The book warned that food advertising copy should "name the vitamins" and be explicit.

The bureau pointed out that vague or general claims should be avoided and that such phrases as "rich in vitamins," "rich vitamin value" or use of the unqualified term "vitamins" without stating the specific vitamin or vitamins present in the article advertised should be dropped. "When an advertiser represents that a food product contains a particular vitamin the reader is entitled to believe that the vitamin is present in sufficient quantity to be of material dietary value," the bureau said.

• HUNT

OFFERS A COMPLETE LINE OF CHEMICALS for the LITHOGRAPHER

Listed below are twelve of our most widely used chemicals for the Lithographic Industry. Like all Hunt products they are carefully pre-tested and of such uniform quality that they always give the same results. Complete catalogue and price list on request.

Glycerine C.P.

Hydroquinone

Rubber Solution

Negative Collodion

Stripping Collodion

Gum Arabic Selected

Litho Developing Ink

Edible Hen Egg Albumen

Paraformaldehyde U. S. P.

Sodium Carbonate Photo Pure

National Photographic Carbons

Sodium Sulphite Anhydrous Photo

PHILIP A. HUNT COMPANY

2432 LAKESIDE AVE.
CLEVELAND, OHIO

253-261 RUSSELL ST.
BROOKLYN, N. Y.

EST.
1909

1076 W. DIVISION ST.
CHICAGO, ILLINOIS

111 BINNEY STREET
CAMBRIDGE, MASS.

OFFSET INKS

**TIN PRINTING INKS
DEVELOPING INK
LITHO OPAQUE**

Superior products designed for the finest work and developed in conjunction with leaders in the lithographic field.

THE CRESCENT INK & COLOR CO.
OF PENNSYLVANIA

464 N. FIFTH ST. PHILADELPHIA, PA.

GOERZ

LENSES

for Photolithography
"The Most Exact Tools"



ARTAR APOCHROMAT
f:9 to f:16

The ideal lens for color separation negatives. Color-corrected to produce images of the same size, to correctly superimpose in the finishing process. Focal lengths: 12 to 70 inches.

New sizes 4" and 6" for color separation blowups from 35 mm. Kodachrome.

GOERZ PRISMAS
of the Highest Accuracy — For reversed negatives to save stripping the film, and reduction work.

GOTAR ANASTIGMAT
f:6.8, f:8, f:10

Assuring freedom from distortion, this is the ideal lens for intricate subjects requiring an intense clarity of definition. Focal lengths: 8 1/4 to 24 inches.

**GOERZ FOCUSING
MAGNIFIER**

with Adjustable Tube — For real accurate focusing at a fixed distance from ground glass or in checking up negatives.

For FREE literature address DEPT. P. L. 3

C.P. GOERZ AMERICAN OPTICAL CO.
317 EAST 34TH ST. NEW YORK CITY

New Equipment and Bulletins

Announces New Light Source

Chicago Lighting Institute, Chicago, has announced a new light source said to be 10 per cent brighter than the sun. The new light is a quartz capillary tube containing a small amount of mercury under a pressure of 1200 pounds per square inch. The light produced is of the violet ray type and is declared to be as powerful as that from a twin ampere arc consuming 7,700 watts. A feature of the new lamp is its size, which is described as smaller than a cigarette. It is one-sixteenth of an inch in diameter by one inch long. It is said to liberate one and one-half horse power from the 1,000 watts of energy it absorbs from the power line. The lamp is automatically cooled, being enclosed in a large tube through which three quarts of cooled water flow each minute. Literature available on request.

Eclipse Data Folder

Eclipse Airbrush Co., Pneumix Division, Newark, N. J., has just issued a six-page illustrated data folder on the performance of its Pneumix Air-Motored Agitators in laboratories and industrial plants. Copies available.

New Stripping Machine

Brackett Stripping Machine Co., Topeka, Kans., has announced the new "Utility All-Purpose Single-Head Stripper," designed, it is said, to turn out a variety of stripping formerly possible only on larger, more expensive, machines. The manufacturers state that the stripper will do all kinds of back stripping, as well as a wide range of flat stripping. This combination, they feel, should interest book binders, paper box manufacturers, bank supply manufacturers and plants of similar character. The machine has

six operating speeds, is manually fed and will, it is declared, operate just as fast as it can be fed. The machine is 3¼ feet wide by 6½ feet long, plus 3 feet for delivery box. Floor space required is 5 feet by 11½ feet. Further details available on request.

New De Vilbiss Catalog

De Vilbiss Co., Toledo, has just issued a new illustrated catalog containing complete information on its line of hose for spraying equipment. The company's full line of hose connections, valves, couplings and adapters are also described.

Issues World's Fair Colors

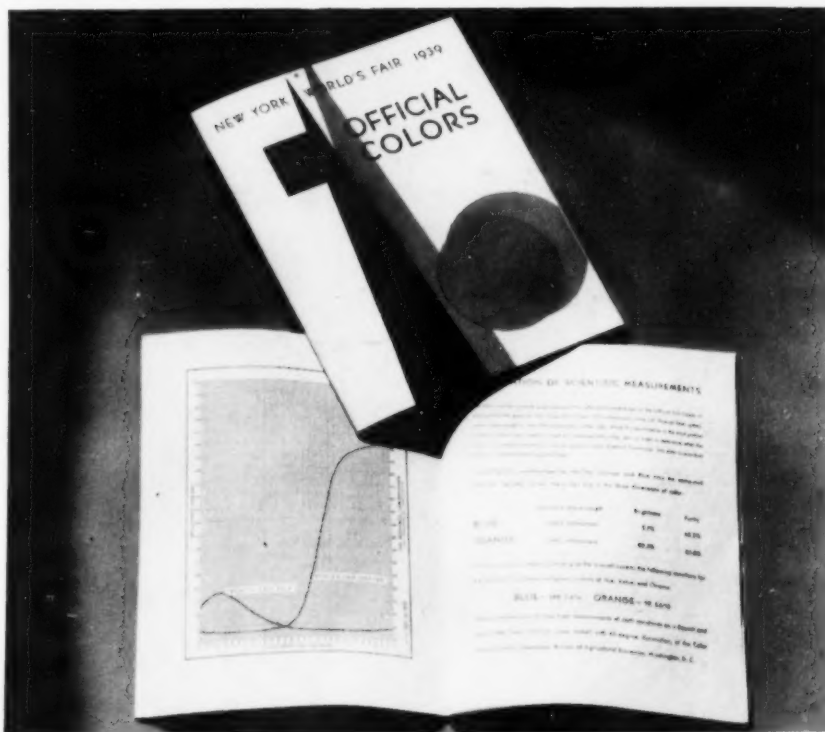
International Printing Ink Corp., New York, has just issued a booklet in which is reproduced the official World's Fair Colors. The booklet is designed to aid advertisers and lithographers who are producing

literature for use in connection with the Fair.

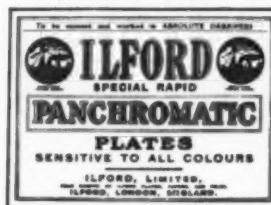
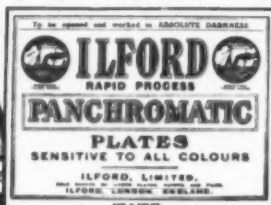
The colors, World's Fair orange and World's Fair blue, are reproduced on seven paper stocks: coated enamel, rag bond, No. 2 coated, wove offset, process coated English finish, eggshell test and antique cover. The ink matches, according to the booklet, have been approved by the Fair's color consultant, fashion consultant, and purchasing department. Samples of lithographic inks, gloss inks and inks for regular letterpress printing are included in the brochure.

New Ben Day Folder

Ben Day, Inc., New York, has just issued a new illustrated folder describing the various applications of Ben Day Shading Mediums. Straight Line Tints, Curved Tints, Grain Stipples and Textures, Hand Stipples, Mechanical Stipples and Graded Tints, and Straight and Wavy Line Applications are included in the illustrations. Attention is also called to the other Ben Day products which include Lithographer's Film Laying Ink, Waterproof Acid Resistant Opaques, Rubber Rollers and Inking Rollers. Folder available on request.



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The Half-tone Panchromatic Plate (H&D 75) is generally conceded to be the most contrasty panchromatic plate made; it is highly sensitive to green and red and produces the sharpest dots obtainable in any medium. The Rapid Process Panchromatic Plate (H&D 130) has been the standard for "direct" color screen negatives for many years.

highly color sensitive and capable of good dots. The Special Rapid Panchromatic Plate (H&D 700) and the Soft Gradation Panchromatic Plate (H&D 1200) have a long, even scale of gradation, great latitude, decidedly fine grain and freedom from fog and stain. These are standard plates for separation negatives by the "indirect" method.

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New York Printers to Stage 'Modern Trends' Show Mar. 20-22

THE 4th Modern Trends in Printing and New Developments in Equipment Exhibition and Production Conference, sponsored by the New York Employing Printers Association, will be held at the Hotel Astor, New York, March 20, 21 and 22. The 10th floor of the Hotel Astor and part of the 8th have been reserved to house the exhibits and provide quarters for the daily conferences devoted to problems of equipment and production.

Leading companies in the printing machinery, supply, and service fields will exhibit. The exhibition will be in two sections: (1) Modern Trends in Printing and (2) New Developments in Equipment. In the former will be shown type designs, papers, paper finishes, styles of binding and finishing, inks, and any new development designed for the improvement of the printed product. In the New Developments in Equipment section small machinery which can be appropriately displayed will be shown, with the facilities that are available, and auxiliary appliances and gadgets designed to increase production or improve quality.

On the evening of March 20 a production dinner meeting will be held at which recognized authorities on various divisions of the Graphic Arts will lead discussions and answer questions on Composition, Presswork, Binding, Photo-Engraving, Electrotyping, Offset Lithography, Ink, Rollers, Gravure, and Silk Screen Printing. Conferences on these subjects and discussions under the same discussion leaders will be held at regularly scheduled hours on the second and third evenings.

On the first two afternoons of the exhibition (Monday and Tuesday) motion pictures demonstrating new equipment and new processes will be shown. On Wednesday noon there will be a luncheon meeting,

arranged by the Associated Printing Salesmen, Inc., the Employing Printers sales group, emphasizing the importance of better informed salesmanship. The exhibition will get under way with an Exhibitors Luncheon on Monday, March 20, which will be followed by a preview of the displays. The exhibition will be open daily from noon to 10 p. m. Admission will be by invitation. Tickets of admission may be obtained, without charge, from the Association.

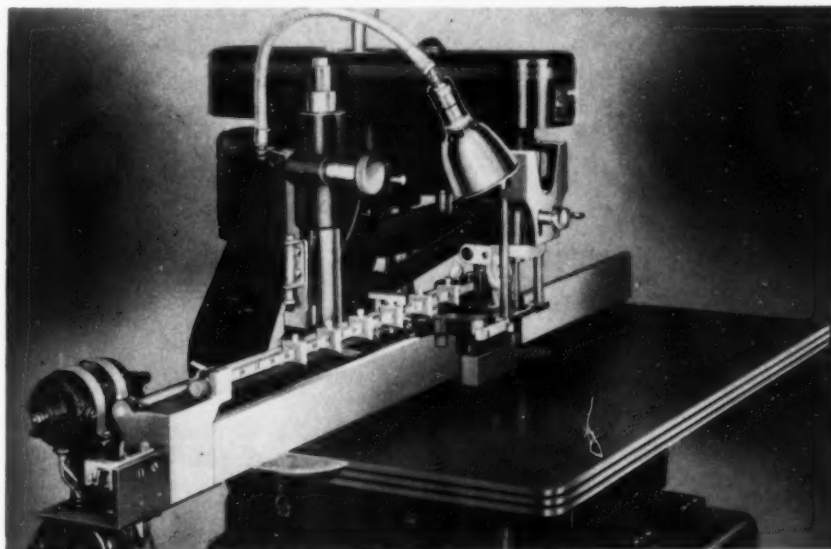
Among the companies which will be represented in the exhibition are: American Type Founders Sales Corp.; Russell Ernest Baum; E. W. Blatchford Co.; Challenge Machinery Co.; Chandler & Price Co.; C. B. Cottrell & Sons Co.; Harris-Seybold-Potter Co.; Intertype Corp.; E. P. Lawson Co.; Ludlow Typograph Co.; Matrix Contrast Corp.; Miehle Printing Press & Mfg. Co.; Miller Printing Machinery Co.; Payne & Walsh Corp.; Sinclair & Valentine Co.; United American Metals Corp.; Uranium Lighting Corp.; Vandercook & Sons; Webendorfer-Wills Co.; West Virginia Pulp & Paper Co.

Some of the exhibitors have announced what they plan to exhibit in advance. Vandercook & Sons, Chicago, will demonstrate the complete equipment and the procedure followed in the production of transparent impressions by the Monsen Method. Challenge Machinery Co., Grand Haven, Mich., will hold the first exhibition showing of the Challenge paper drilling machines equipped with either the new automatic trip gage, or the fully automatic (electrically operated) gage. The automatic trip gage is now standard equipment on all present foot and hydraulically-powered Challenge drills. The fully automatic gage is available at extra cost on styles E, EH, and EKH Challenge paper drills.

Harris-Seybold-Potter Co., Cleveland, will show a number of color movie films of its plate making department and also some interesting results of recent research conducted by its chemical department. Miehle Printing Press & Manufacturing Co., Chicago, will exhibit photographs of a few of its latest presses. Of interest will be the Miehle No. 69 four-color offset press with the new Dexter Stream Feeder attached.

Did you fill out the Coupon on page 10? Better do it now!

Challenge Machinery Co., Grand Haven, Mich., will show its paper drilling machines with automatic gages.



Keeping in Touch

PLACE IN THE SUN—About the only thing sun-kissed oranges have on our inks is that you can eat the oranges. Down in Miami there is a special laboratory to test colors for light fastness. The healthy rays of the Florida sun (courtesy:



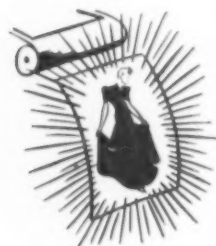
Miami Chamber of Commerce) play all over ink samples we send down to them—for certain results, actual sun testing is necessary. While they are being checked for permanence, these sun-tested inks bask for days—even months—under the warm Miami skies. At about this time of year, we certainly do envy them!

TWO MILLION—The paint company that advertises "We cover the earth" had better move over. The IPI Lithox ink sold last year, if spread out to press sheet film thickness, would wrap itself around the earth no less than seven times! This must prove something or other, besides the fact that IPI ink goes a long way. When lithographers buy two million pounds of Lithox inks in just one year, it should indicate that they appreciate the strong, clean colors and the fast-drying properties which characterize these distinctive offset inks.

ADDENDA—Ever since our Expectant Mother Green was ferreted out by THE NEW YORKER, we have been self-conscious about the terrible completeness of the IPI color line. This feeling has been emphasized by the discovery in our billings of a "Fun in Bed Yellow" (FUN IN BED is a book!) and an "All Saints Blue." If it's specialties you want, IPI has them.



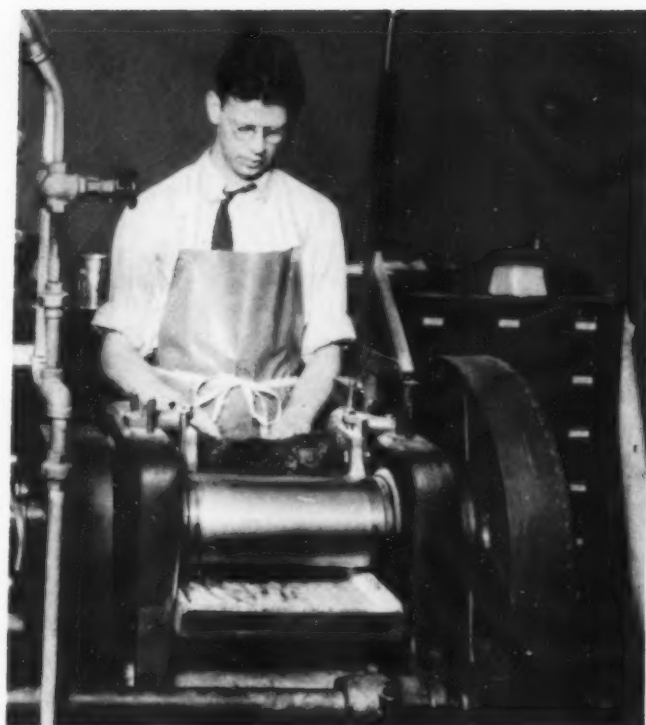
VOGUE—The vogue for gloss inks continues, and IPI's research on gloss inks continues, too. Improved gloss inks for offset are available now, as a result of this research. Many lithographers are using these Glo-Ray gloss inks in producing magazine covers, containers, labels, and other jobs where the additional "eye-appeal" of gloss is important. This boosts profits, of course, by saving the cost of an overprint varnish. Why not try the new research-tested



Glo-Ray? Be sure to mention your paper stock when ordering, since this is an important consideration in gloss printing.

WRITE: For more information on any of these items or for details on IPI's complete lithographic services, please drop us a line. "It Pays to Keep in Touch with IPI."

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New No. 43 OFFSET BLANKETS

THE PHOTO-LITHOGRAPHER

24-Sheet Posters

(from page 26)

Rainier for three days, but found no suitable location. By this time I was a little worried, since we had come fourteen hundred miles to get a photograph, and as yet I hadn't even had the camera out of the case. The third night, while looking through the tourist folders, I happened to see a picture of Mt. Shuksan in the Mt. Baker Park. This mountain is about sixty miles out of Bellingham. The next morning we left for Bellingham, and that afternoon drove to Mt. Shuksan. The mountain was a beauty and on a curve in the road I found a spot from which I could photograph it. However, to get the car in the picture, it was necessary to build a platform out over the canyon for the camera. Also, due to the fact that we were surrounded by large trees, the sun only hit the place where the car and models would be posed for about four minutes during the day. However, we got the platform built, secured the models, clothes and car. And about 4:00 o'clock on the third day in Bellingham we clicked the shutter.

Probably the most interesting thing about these posters is the public reaction to them. The Union Oil Company has received a large amount of what might be called fan mail. Letters from all parts of the west have been received, congratulating the company on their use of the boards. A woman in El Centro, California and one in Tacoma, Washington requested copies of the 24-sheet on the Monterey Peninsula (Midway Point) to use as murals in their living rooms. A store in Long Beach, California (see page 24), and one in Riverside, California used the Monterey poster and the beach scene for backgrounds in their show windows. The Press Club, and also the Golden Lion Cocktail Lounge in San Diego, California, used reproductions of several of the posters for murals. (See page 25.) Automobile dealers and garages have used them for their showrooms. A little Theatre in Berkeley, California used one of the posters for a backdrop. And

two churches used one of the posters as a wall decoration for bazaars. Naturally, this interest has been both interesting and gratifying to all of us who had anything to do with making them, as you can well imagine.

Color Transparencies

(from page 19)

gray scale in the original, since the original subject will also run from approximately the same white to about the same black. Used together with the color spots, the retoucher can then tell at a glance whether the negatives or positives have been correctly exposed and developed.

Of course, there is very little excuse for incorrectly exposed or developed negatives ever to reach the retouching stand. But when working from transparencies, as has been stressed previously, the gray scale merely indicates the correctness of development, and the correctness of the exposure must be judged from the negative itself. It, therefore, is the retoucher's job first, to determine whether or not any of the negatives of the set show over or under exposure, and to indicate to the man making the intermediate positive the degree of correction necessary; or, if the error is too great, see to it that a new negative is made. Assuming correctly exposed and developed negatives are produced, the next most important possible error which must be checked is the result of the use of filters. If they cut too sharply, as mentioned before, there will be too strong an impression of the ink, resulting in grayed colors. This can be corrected, generally speaking, by careful retouching.

The most important plate to watch is the yellow plate since the blue filter frequently cuts too sharp, particularly when using tungsten light. Also, the blue filter negative, unless perfectly exposed and developed, will usually show distortions in the middle tones, tending towards weakness on the highlight side and heaviness on the shadow side. The gray scale will indicate this and should be made to match

the other two. It is possible to make a key for the particular lithographic inks to be used on the job which the retoucher can follow in gauging the amount of correction needed to obtain any particular color. A future article will deal with this in considerable detail.

It is possible that the vast number of words which seem to be necessary to emphasize the real points of a problem such as this, tend, in large measure, to befog the issue and make it appear at first reading a very difficult and complicated thing. As stated at the beginning of the article, it is merely a problem of making good separation negatives. It is necessary, however, to emphasize again and again to the practical worker who has become steeped in the routine of flat copy that in working from transparencies, he must be guided entirely by his copy and not rely on the gray scale and color spots as has become his habit.

Those lithographers who have not fallen completely into the routine will immediately recognize that this is a basic fundamental of any type of separation work, and that the gray scale and color spots are but a very convenient crutch to help the routine worker turn out a more accurate and consistent job. The making of separation negatives from transparencies really boils down to doing carefully and thoroughly everything which should be done in making any type of separation negative. The exponent of the miniature camera claims great credit for obtaining his enormous enlargements from very tiny negatives, but never seems to claim the real credit which he deserves; namely, that because of his limitations he must be a thorough and careful worker. The same amount of energy spent on a larger negative would yield proportionately superior results. So it is in making separation negatives. Good results only come from careful, thorough workmanship.

Brandau Craig Dickerson Co., Nashville, Tenn., recently purchased a two-color 42 x 58 Harris Offset Press.

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Lithographic Abstracts

Abstracts of important current articles, patents, and books, compiled by the Research Department of the Lithographic Technical Foundation, Inc. These abstracts represent statements made by the authors of articles abstracted, and do not express the opinions of the abstractors or of the Research Department. Mimeographed lists have been prepared of (1) Periodicals Abstracted by the Department of Lithographic Research, and (2) Books of Interest to Lithographers. Either list may be obtained for six cents, or both for ten cents (in stamps). Address the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio.

Photography and Color Correction

Colour, Additive and Subtractive—How it Works. F. H. Smith. *Paper and Print*, 11, No. 44, Winter, 1938, pp. Sup. 120, 122. A clear, elementary explanation of the additive and subtractive methods of color reproduction, and of the action of color filters.

Making the Half-tone Separation. "The Platemaker." *The Mid-western Lithographer*, 3, No. 9, Jan., 1939, pp. 5-6. Following detailed instructions for the making of half-tone color separations, a list of points to be remembered is given. Flash or highlight exposures should not be used, as a one-exposure method keeps the color separations in better balance. Screen angles of 90, 75, 105, and 45 degrees should be used for the yellow, red, blue, and black printers. Color correcting is done by dot etching and staining.

Vibration Detector for the Process Camera. F. J. Tritton. *Process Engravers' Monthly*, 46, No. 541, Jan., 1939, pp. 22, 24. A system is described for detecting camera vibration at the time of exposure. For use with a camera without a prism, a parallel beam of light carrying an image of a half-tone screen is projected via mirrors attached to the back of the camera from the copy board to a position in front of the camera. Here it is picked up

by a telescope containing in the eyepiece a photographic reduction of the Ilford Screen Direction Indicator. The latter, upon encountering the half-tone image, produces circular interference patterns which are made to "wink" by any vibration in the copy board, lens panel, or camera back. A system applicable to a camera with a prism on the lens is also illustrated.

Panchromatism (Booklet). Anonymous. Ilford Ltd., Ilford, London, England, 40 pp. 6d. Data is given on the nature of color, the uses of orthochromatic and panchromatic emulsions of varying sensitivities, the additive and subtractive methods of color recording, color filters, haze penetration, and the Infra-Red process. A color test chart and a chart of exposure factors are included. (*Process Engravers' Monthly*, 46, No. 541, Jan., 1939, p. 5.)

Color. T. S. Hiller. *The Photo-Lithographer*, 7, No. 1, Jan., 1939, pp. 15-6, 61. The sensitivity of regular and orthochromatic emulsions to various colors, and the correct color filters to be used in making color separation negative for photo-offset lithography are discussed. Dot etching and masking methods of color correction are mentioned in connection with the direct and indirect processes of preparing color separation negatives.

Process of Producing a Screened Work Copy of an Original to be Reproduced. W. Schupp. *U. S. Patent* No. 2,145,999 (February 7, 1939). The process for producing a screened work copy of an original to be reproduced, which process comprises producing a main or screened negative of said original having the shadow dots thereon larger than normal and the lights closed more than normal, subjecting a sensitive film to a very short

exposure to produce a first continuous-tone negative of said original, developing and fixing said first continuous-tone negative in a developer composed of an aqueous solution of pyrocatechin and an alkali carbonate, subjecting a sensitive film to high over-exposure to produce a second continuous-tone negative of said original, developing and fixing said last mentioned negative, and super-imposing the three negatives upon a sensitive film and exposing the negatives upon said sensitive film.

Photographic Aspects of the Theory of Three-color Reproduction. D. L. MacAdam. *Journal of the Optical Society of America*, 28, No. 11, Nov., 1938, pp. 399-418. Following a review of the colorimetric and photographic principles of additive color reproduction and of the concept of spectral sensitivity, the desirability of emulsions having contrast independent of wave-length is emphasized. The methods of Hardy and Wurzburg for realizing desirable partially negative spectral sensitivities are shown to be useless. Two masking methods are described. Errors in additive color reproduction due to ignoring the negative portions of spectral sensitivity curves are compared; the smallest error results from the simple omission of all sensitivity in the wave-length regions where the theory calls for negative sensitivity. Purity can be increased by increase of contrast, but errors in dominant wave-length and brightness result from the excessive contrasts.

Planographic Printing Surfaces and Plate Preparation

Photomechanical Questions: Printing Plates by Projection. J. S. Mertle. *Graphic Arts Monthly*, 10: 54, 56, 58, 62, September, 1938. Direct projection of half-tone screen images on lithographic press plates coated with bichromated albumen has required the use of 125-ampere to 185-ampere arcs which radiate great quantities of heat and consume current excessively. The water



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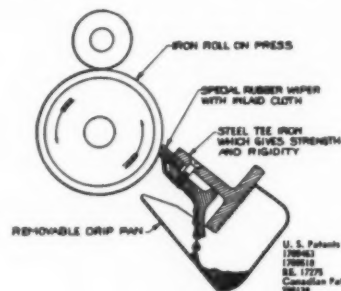
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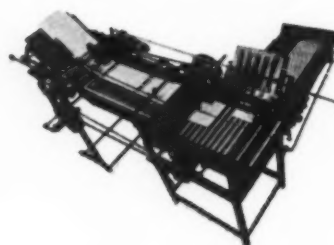
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cooled high-pressure mercury vapor lamps recently introduced are said to be more satisfactory. Being steady, they do not cause oscillation of the image, and are relatively cool, and economical. (*Monthly Abstract Bulletin of Eastman Kodak Company*, 24, Nov. 1938, p. 540.)

Offset-deep Plates from the Machine-Man's Point of View. M. Leeden. *Modern Lithographer and Offset Printer*, 34, No. 12, Dec., 1938, pp. 246, 248. In deep-etch plate making the etching solution must not damage or penetrate the negative image. Equally important is the formation of the ink-attracting image on the etched metal. Etching the plate too deep, incorrect dot size in half-tones, and breaking away of the image are common difficulties. The latter is due to leaving on the metal after etching a slight trace of gummy substance which prevents contact of the ink with the metal. Practical advantages of a good offset-deep plate are that less water is required, and that every line and dot has a clean edge which is easy to preserve throughout a long run.

Printing-Surfaces. Addressograph-Multigraph Corp. *British Patent* No. 493,135 (March 1, 1937). A planographic printing-plate comprises a printing-surface of a water-absorptive cellulosic material resistant to disintegration by water, receptive of grease when dry and resistant to grease when dampened, the printing-surface being united to a co-extensive flexible support impregnated with a waterproof adhesive. Such a plate may be prepared for printing by directly impressing a greasy image thereon, e.g. by means of a typewriter, heating the plate to integrate the image and then dampening the face to render the non-printing areas ink-repellent. The plate may be secured directly to the printing cylinder of a press, or may be attached to a thin metal sheet adapted to be secured to the printing member. The plate may comprise a printing face of paper saturated with a cellulose derivative, or of a film of cellulose derivative, secured to a support

of heavier paper impregnated with a waterproof thermoplastic adhesive. Specification 430,111 is referred to.

Equipment and Materials

The Projection Machine. F. O. Sullivan. *National Lithographer*, 46, No. 1, Jan., 1939, pp. 22, 24. A detailed description of a projection unit invented by A. B. Mueller of Rutherford, New Jersey. Because of its simplicity, ease of operation, accuracy, and wide latitude in projecting images to the press plate, it is claimed to be necessary equipment in a litho plant doing displays and posters.

Plate Coater. J. Falch. *Reproduktion*, 9, Dec., 1938, pp. 178-80. Falch deals with the Stator coating machine, an interesting innovation in the sensitization of litho (metal) press plates with bichromated colloid solutions. Heretofore, sensitizing of the plates has been performed on a rotating whirler, but the Stator machine dispenses with this principle in favor of an upright apparatus, on which the plate is coated by drawing it perpendicularly through a trough of sensitizing solution. A squeegee arrangement provides a uniform coating of solution, which is dried by passing the coated plate in front of a heating unit, contained in the Stator machine. (*American Photo-Engraver*, 31, No. 2, Feb., 1939, p. 133.)

The Manufacture of Blankets and Rollers. Part II. R. R. Lewis. *National Lithographer*, 46, No. 1, Jan., 1939, pp. 14, 16, 45. Metallic driers in offset inks have a destructive effect on the rubber of blankets and rollers; and swelling is caused by oils, varnishes, and various solvents used in washing. The use of two washes is recommended: a non-swelling solvent such as methyl ethyl keton followed by a solution of an anti-oxidant in a petroleum solvent. Neoprene, Thiokol and Perbunan are more stable than rubber and swell less. They have less resilience, however, are not as receptive to ink, have considerable odor, and are more expensive. A brief outline of blanket

tests is given. In rollers, resistance to tackiness, oxidation, and aging are of great consequence. Synthetic materials have proved satisfactory for offset rollers, as they resist oxidation, are not too resilient, and retain a permanent degree of tack. The manufacture of rollers is described.

Progress Shown in New Equipment. E. D. Doe. *Printing*, 63, No. 1, Jan., 1939, pp. 70-2, 74-80, 82, 84, 86, 88, 90, 92-4. A review of new equipment introduced during 1938 is presented under the following headings: (1) Composing Room, (2) Machine Composing, (3) Relief Presses, (4) Offset Presses, (5) Offset Equipment, (6) Gravure Presses, (7) Inks and Rollers, (8) Pressroom Aids, (9) Spray Guns, (10) Air Conditioning, (11) Binders' Supplies, (12) New Binding, (13) Plate Making, and (14) Miscellaneous.

Printing. Rapid Roller Co. *British Patent* No. 495,159 (Jan. 28, 1938). *Damping-apparatus; copying documents.*—A damping-roller for use in lithographic printing-machines, copying-machines, etc. is constructed with a metal shaft and a resilient water absorbent surface layer secured thereto composed of a rubber-like binder having distributed therethrough finely divided particles of a water absorbent material as a filler, some of said filler particles being exposed at the surface of said layer. The filler may comprise from 25-75 per cent by weight of the mixture, and the rubber may be sponge rubber, or synthetic rubber prepared by polymerizing chloroprene, or may be halogenated or hydrohalogenated rubbers, or polymers of butadiene. Rubber accelerators, antioxidants, and/or softeners may be added. The rubber composition may be secured by vulcanizing direct to a metal shaft, or a layer of soft rubber may be connected to the shaft by vulcanizing, or cementing, and a surfacing layer of sponge rubber composition vulcanized thereto. A rubber sleeve composed of an outer composition layer and an inner layer of soft rubber may be anchored to a metal



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core. The filler may be composed of absorptive cotton, wool flock, artificial silk flock, powdered sponge, leather or cork powder, wood flour, or the like. The composite layer may be attached to a hard rubber core secured by key-ways to the metal core.

Photomechanical Questions: Care of Optical Instruments.

J. S. Mertle. *Graphic Arts Monthly*, 10: 36, 38-9, August, 1938. Lenses, prisms, half-tone screens, and color filters should receive special care. Suggestions are offered for avoiding damage to such equipment, and for cleaning, storage, etc. (*Monthly Abstract Bulletin of Eastman Kodak Company*, 24, Nov., 1938, p. 539.)

Paper and Ink

The Meaning of the Term Printability. S. R. H. Edge. *Paper-Maker*, Annual No., 1938, pp. 8, 10, 72d. A paper of the highest printing quality will have the following advantages: (1) low ink consumption, (2) rapid drying of prints, (3) perfect register, and (4) uniform appearance of solid color areas. The paper maker can do very little to reduce ink consumption without altering some other characteristic of the paper such as reflectivity or smoothness; nor can he increase the rate of drying when a particular ink and a particular appearance of the finished print has been decided upon. Perfect register can only be obtained by humidity control in the printing plant, and paper conditioned to the same humidity. Uniformity of solid color areas is limited by the type of paper surface chosen. Printability is a correspondence between certain properties in the paper and certain requirements of the particular printing process to which the paper is to be submitted.

Chemical Discoloration. C. Ockrent. *British and Colonial Printer and Stationer*, 124, No. 536, Jan. 26, 1939, pp. 85-9. Discoloration of pigments may be caused by light, chemical action, and solvent action. Following a brief classification of pigments as to chemical type, the

discoloring agents in paper and board, in adhesives, and in the atmosphere are discussed. The chemical resistivities of the common colored pigments are given. Care should be taken to choose a pigment chemically suitable to the conditions under which it is to be used. As chemical discoloration generally depends upon the presence of a sufficient amount of moisture, the discoloration can be reduced to a minimum by storage in dry conditions. Some cases of discoloration investigated by Patra are described.

St. Louis Club Studies Comparison of Flushed and Dry Colors.

St. Louis Paint and Varnish Production Club. *American Paint Journal*, 23, pp. 8, 25 (Oct. 26, 1938). The flushing process is outlined. The tinting strength of the flushed colors varied somewhat with the flushing vehicle. The greater tinting strength was secured with the better wetting liquids. Equal or superior gloss is secured in nearly all cases of flushing, especially in the cases of toluidine and para toners. Better suspension is found in flushed chrome greens. Dry ground colors had better hiding. Two factors that influence the decision of using flushed colors are: (1) the necessity of carrying the same color flushed in several vehicles and (2) the grinding cost against the premium paid on flushed colors. (*Chemical Abstracts*, 33, No. 1, Jan. 10, 1939, p. 414.)

Water-soluble Acidity or Alkalinity of Paper.

Anonymous. *Technical Association of the Pulp and Paper Industry Standard*, T428 m-39, Revised, Jan., 1939; *Paper Trade Journal*, 108, No. 5, Feb. 2, 1939, p. 29. The apparatus, reagents, procedure, and formulas for determining the acidity or alkalinity of paper are described.

Determining Water Vapor Permeability of Sheet Materials.

G. J. Brabander. *Paper Trade Journal*, 108, No. 4, Jan. 26, 1939, pp. 39-43. Water vapor permeability tests have been made on seven different sheet materials by eleven

co-operating laboratories using the suggested standard procedure for this test. The results are herein assembled, tabulated, and analyzed.

Printing with High Gloss Inks.

Anonymous. *Paper and Printing Digest*, 5, No. 1, Jan., 1939, p. 15. In printing with gloss inks, too much ink must not be carried on the printing form, an anti-offset spray should be used, the piles should be winded and should not be run too high, and a kiss impression is best. A slower drying ink should be employed during make-ready. A room temperature of 80 degrees is favorable. Before running a job, the ink should be tested on the paper to be used.

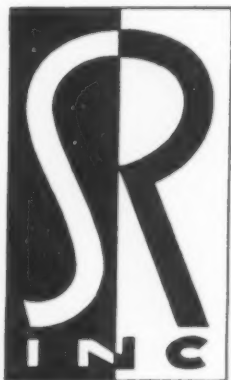
General

Modern Lithography. A. P. Hubner. *British and Colonial Printer and Stationer*, 123, No. 532, Dec. 29, 1938, p. 706. Color negatives are being retouched more accurately. Standardization of artists' paints, printing inks and color filters is necessary for the progress of retouching by masking. The life of a deep-etch plate depends upon the grain; and in determining what grain is most suitable, the length of run should be considered. Little advancement is predicted in the production of color posters by the enlarged screen method until the number of colors used is reduced considerably.

Miscellaneous

Engineering and the Graphic Arts.

T. E. Dalton. *Photo-Engravers' Bulletin*, 28, No. 6, Jan., 1939, pp. 2-10. The conclusions reached by this paper are that: (1) The graphic arts industries require more engineering and more engineering coordination; (2) the graphic arts field is a fertile one for engineers who can evaluate correctly and are qualified to work for its real needs, cooperating with the craftsmen and the management of the industry; (3) finally the graphic arts must obtain a lowered unit cost of production, must eliminate waste, and must remove the deterrents of productive efficiency.



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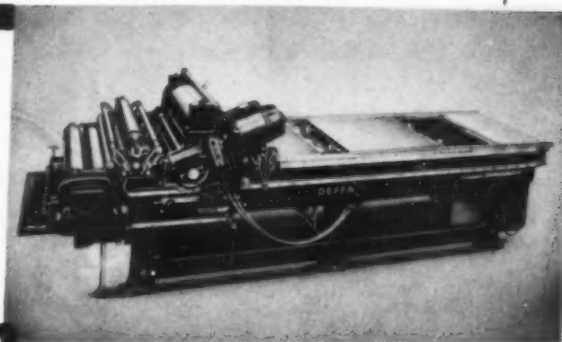
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Coated Papers

(from page 21)

in order to show differences in the characteristics of the papers being tested, and maximum contrast occurs immediately after removing the excess ink.

What paper characteristics this test indicates other than relative gradations in ink receptivity, and even what interpretations can be placed on these, are determined by judgment and experience. It is therefore absolutely essential that the person, or persons, conducting the test be familiar with the requirements. We know that ink dries in some measure by absorption into the coating of the paper. Between an ink resistant paper that will retard this process, all other factors being the same, and a too-receptive paper which will absorb too much ink, or cause the ink to lose its brilliance, lies the paper for the job. Which one it is depends on the job in hand. It is up to the lithographer to know his customer's requirements well enough to be able to pick one in the range, as indicated by the test.

ANOTHER variable in coated paper which is difficult to judge visually is the uniformity of the ink acceptance. Here again the practical test previously described shows up the differences among the various papers tested, and enables the lithographer to make a choice. In the photograph captioned No. 2 the results of an ink smear on two coated papers is shown. They were both coated using the same formula and amount of coating, but different body stocks were used.

The coated paper on the right was made by coating a sheet of lumpy formation, and then calendering level the knots or bundles of fibers. An uneven acceptance of the ink was the result, reflecting the uneven density of the surface structure beneath the coating. In making the test on two or more coated papers, it will be found that acceptance of the ink varies according to the length of the fiber or the size of the fiber bundles in the body stock be-

fore calendering. Of course, the "tapioca" surface produced by the smear will necessarily vary with the inks used but it always can be compared and is more pronounced when fresh, or immediately after the excess test ink is wiped clear.

Whether a coated stock, or a super or machine finish paper should be used on a job depends, of course, on the job and what the buyer wishes to use it for. He may be only interested in appearance. On the other hand, many other factors may enter the picture. Some subsequent treatment, such as lacquering or spirit varnishing, for which some papers are unquestionably better suited than others, may be applied. Spirit varnishing or lacquering of the surface following printing have become increasingly important. They enhance the appearance of the job, act as a protective against finger marking, and are moisture and vapor-proof. Coated papers have shown themselves well adapted to varnishing and lacquering after printing.

It is difficult to make tests of the comparative resistant qualities of several coated papers to varnish or lacquer which are practical unless they duplicate exactly the method actually used in commercial practice. However, conclusions which are helpful and serve as a guide in selecting the right paper can be drawn by applying to several samples a predetermined amount of varnish with an even thickness of film. A small knife coater is used for this purpose.

The photograph captioned No. 3 shows the results of such a practical test. Spirit varnish is a difficult surface protection to hold on the surface while at the same time preserving in the coated stock an ink acceptance that is requisite to speed printing. The photograph, taken at approximately the same angle as in visual examination, shows a good varnish-resistant coated paper and a poor one. The sheet on the right, mirroring as it does the glass utensils, is a good varnish-resistant because its surface is able to preserve a gloss by not permitting the varnish to penetrate.

You can also show up the comparative qualities of papers in their resistance to varnish penetration by looking through the varnished samples with a strong light in back of them, as in the photograph captioned No. 4. Actual penetration of the varnish will be seen to produce translucency, as in the sheet on the right. The sheet on the left, however, does not let the light through and is therefore a good varnish resistant. The translucent sheet is too low in resistance for any practical use for overall spirit varnishing.

We have touched on only a few of the variables common to coated papers. But if these few will assist the lithographer in acquiring a closer production control, and help him to pick the right paper for the job, they will have served a useful purpose. Coated papers are being used with increasing confidence and to good advantage in the offset field today. As a reproduction medium, printed with minimum pressures they give good contrast. Especially worth noting is the growing popularity of the blue-white shades for black and white work.

Einson-Freeman Exhibits

Einson-Freeman Co., Long Island City, N. Y., held an exhibition of examples of direct color displays which it has recently produced, at the Roger Smith Gallery, New York, Feb. 13 to 25. Examples from various industries, chief among which were brewing, distilling and cosmetic, were shown.

Announces New Gloss Ink

A new gloss ink, which is said to provide a permanent and brilliant varnish-like finish on any hard-sized coated, litho, or glassine paper, has been announced by Nu-Gloss Printing Ink Corp., Brooklyn. Declaring that the ink is available in all colors, the announcement states that no overprinting or varnishing is necessary and that it has been used successfully on any cylinder press equipped with a non-offset spray and gas heater.

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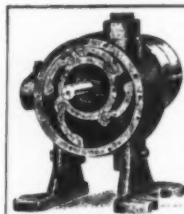
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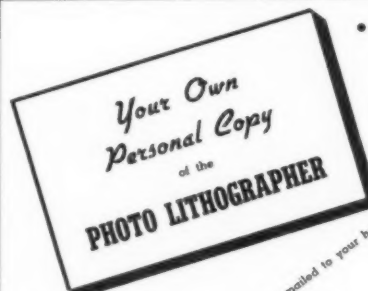
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Lithographic Sales Executive. Can you organize a staff of competent assistants? What is your educational qualification? What is your age? What has been your earning capacity? Do you possess some technical knowledge of this business? Address Box 954.

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As cameraman for half-tone line color work; can do stripping and plate making. Have had 18 years' experience as lithographer. Address Box 951.

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Manager's assistant. Age 25, college graduate. Active, responsive. Two years' color lithography as manager's assistant—estimating, production work, buying, customer contacting, selling. Previous training modern printing plant. Good background through continued study in lithographic and allied fields. Desire connection with modern, efficient plant only. Address Box 952.

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35" or 40" Process lens, color corrected, must be in first-class condition. Will pay cash for same after trial. Pitt Photo Litho Company, 802 Grogan Building, Pittsburgh, Pa.

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33" Voigtlander Triple Anastigmat, Cook lense, 1:10 best condition. Address Box 950.

Consolidated Wins Trophy

Consolidated Lithographing Corp., Brooklyn, was one of 74 firms in New York and vicinity to receive an award for excellence in safety in the Fourteenth Annual State Accident Prevention Campaign of the Associated Industries of New York City, ending last month. The company was awarded a trophy. Among those who received 100 per cent certificates were Hilo Varnish Corp., Brooklyn, Sinclair & Valentine, New York, Commercial Decalcomania Co., Mount Vernon, N. Y., and Decorated Metal Manufacturing Co., Brooklyn. The trophy and certificates were presented at a dinner under the auspices of the Metropolitan Industrial Safety Committee for New York, at the Hotel Astor, February 23.

Litho Club to Hear Staley

Karl Staley, illuminating engineer, General Electric Co., New York, will address the New York Litho Club at the House of Magic, General Electric Bldg., 570 Lexington Ave., New York, March 22 on "New Light for Photography-Transfer and Pressroom." Demonstrations of new light sources, and their relative visibility, the various lights designed for use in the pressroom, the new 1000 watt arc lamp, new drying lamps, and the latest in fluorescent lamp equipment will be shown.

Mr. Staley is district manager of the Incandescent Lamp Dept. of General Electric and special lecturer on lighting subjects at the School of Architecture, Columbia University, and the School of Engineering, New York University. The talk is scheduled for 7:45.



24-sheet poster lithographed by McCandlish Lithograph Corporation, Philadelphia, for Ford.

New Packaging Catalog

Breskin & Charlton Publishing Corp., New York, publishers of *Modern Packaging* and *Modern Plastics*, has just issued its 1939 Packaging Catalog, containing information relating to materials equipment and procedure used in packaging design, production and merchandising. Complete with a buyers' directory of the packaging industries, this 560-page encyclopedia contains just about all anyone would want to know about the many phases of packaging, from principles of design to the legal and legislative aspects. Articles on the latter, by the way, are among the most important in the book, since the new Food and Drug Regulations went into effect. There are articles on Decalcomania, Display Mechanisms, Closures, Metal Decorating, Color Photography, Printing Inks, Labels, Papers, Varnishes, and many others which should be of interest to lithographers. The Buyers' Directory lists all of the manufacturers of materials, supplies and equipment as well as agencies and individuals serving the field.

No Need for Delay on Labels

In a bulletin issued late last month, W. G. Campbell, chief of the U. S. Food and Drug Administration, advised food manufacturers not to delay or postpone the task of revising their labels to conform with the new regulations of the Food and Drug Act on the assumption that further announcements clarifying, interpreting, or

elaborating upon the Act would be forthcoming. For no such announcements are contemplated, the bulletin stated. Except for a special list of exempted products, announced earlier in the month, the regulations issued Dec. 28, 1938 are final, and in effect constitute the Department of Agriculture's interpretation of the Act, which becomes effective in June.

The bulletin appealed to manufacturers and others to refrain from submitting specimens of current stocks of labels to the Administration for review before a thorough attempt has been made by the manufacturers themselves to revise their labels as they see fit, according to the language and spirit of the law and regulations. The Administration will continue to be helpful, the bulletin pointed out, but it is now flooded with inquiries the answers to which, it is felt, are, in the main, to be found in the text of the law and regulations.

Exempts 24 Food Labels

Secretary Wallace last month issued a list of twenty-four food products which will be exempt for the next two years from the requirements of the new Food, Drug, and Cosmetics Act that such products bear labels stating their ingredients. The exemption period is set to the formulation of definitions and standards of purity for such products. The exempted products were listed as follows:

White bread, whole-wheat bread, raisin bread.

Evaporated milk, sweetened condensed milk, malted milk.

Unmixed, immature canned vegetables, properly prepared and with water not in excess of the amount necessary for proper processing, with or without added salt or sugar or both, but with no other added substance.

Unmixed canned fruits, properly prepared and in sugar solution of not less than 20 degrees Brix, not in excess of the amount necessary for proper processing, but with no other added substance.

Canned oysters, canned clams, canned shrimp (dry and wet pack), canned fish roe. Sauerkraut, olives in brine.

Cheeses, oleomargarine, mayonnaise dressing.

Fruit preserves.

Sweet chocolate, sweet milk chocolate.

Lemon extract, orange extract, vanilla extract.

Strachan & Henshaw Folder

Strachan & Henshaw, Ltd., Bristol, England, have just issued a brochure describing their multi-transferring machine. The brochure is complete with photographs illustrating the mechanics of the machine and how it works, just how the plate is clamped on the cylinder and how the original is squared up, as well as other points of importance to the lithographer. In a section in the back, typical sheets of work transferred on the machine are shown. The brochure is available on request. (In the December issue of *THE PHOTO-LITHOGRAPHER* it was stated that Strachan & Henshaw are manufacturers of photo-composing machines. This was in error. The company states that its mechanical step and repeat machine is worked in daylight without the aid of photographic films, chemical solutions, etc.)

Bowlers on Home Stretch

Six teams of bowlers, organized among employees of Edwards & Deutsch Lithographing Co., Chicago, are heading down the home stretch in their third annual inter-department bowling tournament.

The teams have been playing each Thursday. Trophies awaiting final victors include cups to top-ranking teams and cash prizes, contributed in part by the company, to individual high-scoring players. Presentation of awards will be made at a banquet presided over by C. T. Fairbanks, president of the company.

THE PHOTO-LITHOGRAPHER

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Brooklyn, N. Y.—2432 Lakeside
Ave., Cleveland, O.—1076 W. Division
St., Chicago, Ill.—111 Binney St.
Cambridge, Mass.
NATIONAL CARBON Co., INC., Clevel-
and, Ohio.
NORMAN-WILLETS Co., 318 W. Wash-
ington St., Chicago, Ill.
SULLEBARGER, E. T., Co., 116 John St.,
New York, N. Y., and 538 S. Clark
St., Chicago, Ill.

CHEMICALS

AGFA-ANSCO CORP., Binghamton, N. Y.
EASTMAN KODAK Co., Rochester, N. Y.
HUNT, PHILIP A., Co., 253 Russell St.,
Brooklyn, N. Y.—2432 Lakeside
Ave., Cleveland, O.—1076 W. Division
St., Chicago, Ill.—111 Binney
St., Cambridge, Mass.
MALLINCKRODT CHEMICAL WORKS,
3600 N. Second St., St. Louis, Mo.,
and 72-74 Gold St., New York, N. Y.
MERCK & Co., INC., Rahway, N. J.

NORMAN-WILLETS Co., 318 W. Wash-
ington St., Chicago, Ill.

PHILLIPS & JACOBS, 622 Race St., Phila.,
Pa.

PITMAN, HAROLD M., Co., 150 Bay St.,
Jersey City, N. J., and 51st Ave. and
33rd St., Chicago, Ill.

SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

SIEBOLD, J. H. & G. B., INC., 47 Watts
St., New York, N. Y.

COLOR CONTROL AND MEASURING EQUIPMENT

HUEBNER LABORATORIES, 202 E. 44th
St., New York, N. Y.

COMPOSING MACHINES

COXHEAD, RALPH C., CORP., 17 Park
Place, New York, N. Y.

CRAYONS—Litho

KORN, WM., INC., 260 West St., New
York, N. Y.

ROBERTS & PORTER, INC., 100 Lafa-
yette St., New York, N. Y., and 402
S. Market St., Chicago, Ill.

SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

DAMPENING DEVICES

INTERNATIONAL PRESS CLEANER &
MFG. Co., THE, 112 E. Hamilton
Ave., Cleveland, O.

DAMPENING ROLLER COVERS

GODFREY ROLLER COMPANY, 211 N.
Camac St., Phila., Pa.

ROBERTS & PORTER, INC., 100 Lafa-
yette St., New York, N. Y., and 402
S. Market St., Chicago, Ill.

DEEP-ETCH SUPPLIES

PITMAN, HAROLD M., Co., 150 Bay St.,
Jersey City, N. J., and 51st Ave. and
33rd St., Chicago, Ill.
SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

DICHROMATE—Ammonium Photo Granular

HUNT, PHILIP A., Co., 253 Russell St.,
Brooklyn, N. Y.—2432 Lakeside Ave.,
Cleveland, O.—1076 W. Division St.,
Chicago, Ill.—111 Binney St., Cam-
bridge, Mass.

DRYERS

CARTER, C. W. H., 100 Varick St., New
York, N. Y.

HILO VARNISH CORP., 42-60 Stewart
Ave., Brooklyn, N. Y.

SINCLAIR & VALENTINE Co., 11 St. Clair
Pl., New York, N. Y.

DRYERS—Photo Print and Stripping Film

SIMPLEX SPECIALTY Co., INC., 206 E.
33rd St., New York, N. Y.

DYNAMOS—MOTORS—PRESS DRIVES AND ELECTRICAL CONTROL EQUIPMENT

KIMBLE ELECTRIC Co., W. 14th St. &
S. Damen Ave., Chicago, Ill.

ETCHES

SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

FILMS

AGFA-ANSCO CORP., Binghamton, N. Y.
EASTMAN KODAK CO., Rochester, N. Y.
GEVAERT CO. OF AMERICA, INC., THE, 423 W. 55th St., New York, N. Y.
HALOID CO., THE, 6 Haloid St., Rochester, N. Y.
HAMMER DRY PLATE & FILM CO., Ohio Ave. & Miami St., St. Louis, Mo.
NORMAN-WILLETS CO., 318 W. Washington St., Chicago, Ill.

FLANNEL

FUCHS & LANG MFG. CO., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.
INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.
ROBERTS & PORTER, INC., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.
SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.

FOLDING MACHINERY

BAUM, RUSSELL ERNEST, 615 Chestnut St., Phila., Pa.
DEXTER FOLDER CO., 28 W. 23rd St., New York, N. Y.

GLYCERINE

HUNT, PHILIP A., Co., 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, O.—1076 W. Division St., Chicago, Ill.—111 Binney St., Cambridge, Mass.
PITMAN, HAROLD M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

GRAINING FLINT

SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.

GRAINING AND REGRAINING—Zinc, Aluminum, Glass and Multilith Plates

CHICAGO LITHO PLATE GRAINING CO., 214-16 N. Clinton St., Chicago, Ill.
DOETZEL-COREY CO., 221 Third St., N. E. Cedar Rapids, Iowa.
ILLINOIS PLATE GRAINING CO., INC., 913-921 W. Van Buren St., Chicago, Ill.
INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.
LITHOGRAPHIC PLATE GRAINING CO. OF AMERICA, INC., 41 Box St., Brooklyn, N. Y.
RELIABLE LITHOGRAPHIC PLATE CO., INC., 17 Vandewater St., New York, N. Y.
SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.

GUM ARABIC

HUNT, PHILIP A., Co., 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, O.—1076 W. Division St., Chicago, Ill.—111 Binney St., Cambridge, Mass.
PITMAN, HAROLD M., Co., 150 Bay St., Jersey City, N. J. and 51st Ave. and 33rd St., Chicago, Ill.

SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.

HAND ROLLERS

ROBERTS & PORTER, INC., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.
SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.
SIEBOLD, J. H. & G. B., INC., 47 Watts St., New York, N. Y.

HUMIDIFICATION

AIR CONDITIONING SUPPLY CO., THE, 4066 Superior Ave., Cleveland, O.
SOUTHWORTH MACHINE CO., 30 Warren Ave., Portland, Me.

HYDROQUINONE

HUNT, PHILIP A., Co., 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, O.—1076 W. Division St., Chicago, Ill.—111 Binney St., Cambridge, Mass.
MALLINCKRODT CHEMICAL WORKS, 3600 N. Second St., St. Louis, Mo., and 72-74 Gold St., New York, N. Y.
NORMAN-WILLETS CO., 318 W. Washington St., Chicago, Ill.
SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.

INKS

AUGUST, CHARLES, CORP., THE, 416 Orleans St., Chicago, Ill.
CRESCENT INK & COLOR CO. OF PENNA., THE, 464 N. 5th St., Phila., Pa.
DRISCOLL, MARTIN & Co., 610 Federal St., Chicago, Ill.
FUCHS & LANG MFG. CO., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.
GAETJENS, BERGER & WIRTH, INC., 35 York St., Brooklyn, N. Y., and 538 S. Clark St., Chicago, Ill.
HERRICK, WM. C., INK CO., INC., 325 W. 34th St., New York, N. Y.
INCO CO., THE, 1426 W. Third St., Cleveland, O.
INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.
JOHNSON, CHARLES ENEU, & Co., INC., 10th & Lombard Sts., Phila., Pa.
OKIE, FRANCIS G., 247 S. Third St., Phila., Pa.
POPE & GRAY, INC., 94 Morton St., New York, N. Y.
SENELITH INK CO., INC., THE, 32-34 Greene St., New York, N. Y.
SIEBOLD, J. H. & G. B., INC., 47 Watts St., New York, N. Y.
SINCLAIR & CARROLL CO., INC., 591 11th Ave., New York, N. Y.
SINCLAIR & VALENTINE CO., INC., 11-21 St. Clair Pl., New York, N. Y.
TRIANGLE INK & COLOR CO., INC., 26 Front St., Brooklyn, N. Y. (also Boston, Mass., Baltimore, Md., and St. Louis, Mo.).

INK WAX REDUCER (Smoothol Ink Wax)

SMITH, FRANCIS X., Co., 952 E. 93rd St., Brooklyn, N. Y.

INSURANCE—Workmen's Compensation

N. Y. PRINTERS & BOOKBINDERS MUTUAL INSURANCE CO., 147 Fourth Ave., New York, N. Y.

LAMPS—Arc

GELB, JOSEPH, MFG. CO., 250 W. 54th St., New York, N. Y.
SULLEBARGER, E. T., Co., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.

LENSES

GOERZ, C. P., AMERICAN OPTICAL CO., 317 E. 34th St., New York, N. Y.
NORMAN-WILLETS CO., 318 W. Washington St., Chicago, Ill.
PITMAN, HAROLD M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.
SULLEBARGER, E. T., Co., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.
ZEISS, CARL, INC., 485 Fifth Ave., New York, N. Y.

LINE-UP AND REGISTER MACHINES, SYSTEMS AND TABLES

DOUTHITT CORP., THE, 650 W. Baltimore Ave., Detroit, Mich.
LANSTON MONOTYPE MACHINE CO., 24th at Locust, Phila., Pa.

LITHO DEVELOPING INK

HUNT, PHILIP A., Co., 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, O.—1076 W. Division St., Chicago, Ill.—111 Binney St., Cambridge, Mass.
INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.

MACHINISTS

GEHENHEIMER, WILLIAM, 78 Roebling St., Brooklyn, N. Y.
RATHBUN & BIRD CO., INC., 85 Grand St., New York, N. Y.

MAGNIFYING AND REDUCING GLASSES

NORMAN-WILLETS CO., 318 W. Washington St., Chicago, Ill.
REPRO-ART MACHINERY CO., Wayne Ave. & Berkeley St., Phila., Pa.
ZEISS, CARL, INC., 485 Fifth Ave., New York, N. Y.

MAKE-UP TABLES

LANSTON MONOTYPE MACHINE CO., 24th at Locust, Phila., Pa.

MOLESKIN AND MOLLETON

INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.
ROBERTS & PORTER, INC., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.
SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.
SIEBOLD, J. H. & G. B., INC., 47 Watts St., New York, N. Y.

THE PHOTO-LITHOGRAPHER

NEGATIVE MATERIALS

AGFA ANSCO CORP., Binghamton, N. Y.
EASTMAN KODAK CO., Rochester, N. Y.
GEVAERT CO. OF AMERICA, INC., THE,
423 W. 55th St., New York, N. Y.
HALOID CO., THE, 6 Haloid St., Rochester,
N. Y.
HAMMER DRY PLATE & FILM CO.,
Ohio Ave. & Miami St., St. Louis, Mo.
NORMAN-WILLETS CO., 318 W. Wash-
ington St., Chicago, Ill.

OPAQUE AND DEVELOPING INK

ARTISTS' SUPPLY CO., 7610 Decker
Ave., Cleveland, O.
INTERNATIONAL PRINTING INK CORP.,
THE, 636 11th Ave., New York, N. Y.
OKIE, FRANCIS G., 247 S. Third St.,
Phila., Pa.
SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

PAPER

BECKETT PAPER CO., THE, Hamilton, O.
CHAMPION PAPER & FIBRE CO., Hamil-
ton, O.
CHILLICOTHE PAPER CO., THE, Chilli-
cothe, O.
DILL & COLLINS, INC., Richmond &
Tioga Sts., Phila., Pa.
FRASER INDUSTRIES, INC., Graybar
Bldg., New York, N. Y.
HAMILTON, W. C. & SONS, INC.,
Miquon, Pa.
HAMMERMILL PAPER CO., Erie, Pa.
NORTHWEST PAPER CO., THE, Cloquet,
Minn.
STRATHMORE PAPER CO., West Spring-
field, Mass.
WARREN, S. D., Co., 89 Broad St.,
Boston, Mass.
WATERVLIET PAPER CO., Watervliet,
Mich.

PAPER CONDITIONING EQUIP- MENT

SOUTHWORTH MACHINE CO., 30 War-
ren Ave., Portland, Maine.

PAPER AERATION

SOUTHWORTH MACHINE CO., 30 War-
ren Ave., Portland, Me.

PAPER HANGERS—Holdfast

SOUTHWORTH MACHINE CO., 30 War-
ren Ave., Portland, Me.

PAPER JOGGING MACHINES

SOUTHWORTH MACHINE CO., 30 War-
ren Ave., Portland, Me.

PARAFORMALDEHYDE—U. S. P.

HUNT, PHILIP A., Co., 253 Russell St.,
Brooklyn, N. Y.—2432 Lakeside
Ave., Cleveland, O.—1076 W. Divi-
sion St., Chicago, Ill.—111 Binney
St., Cambridge, Mass.

MALLINCKRODT CHEMICAL WORKS,
3600 N. Second St., St. Louis, Mo.,
and 72-74 Gold St., New York, N. Y.

PHOTO COMPOSING MACHINES

LANSTON MONOTYPE MACHINE CO.,
24th at Locust, Phila., Pa.

RUTHERFORD MACHINERY Co., Div.
General Printing Ink Corp., 100
Sixth Ave., New York, N. Y.

PHOTO-LETTERING MACHINES

RUTHERFORD MACHINERY Co., Div.
General Printing Ink Corp., 100
Sixth Ave., New York, N. Y.

PLATE COATING EQUIPMENT

LANSTON MONOTYPE MACHINE Co.,
24th at Locust, Phila., Pa.
RUTHERFORD MACHINERY Co., Div.
General Printing Ink Corp., 100
Sixth Ave., New York, N. Y.

PLATE GRAINING MACHINES

FRICTSHE, R., 145 Hudson St., New
York, N. Y.
ZARKIN MACHINE CO., INC., 335 E.
27th St., New York, N. Y.

PLATE GRAINING MATERIALS

AMERICAN GRADED SAND CO., 2612
Greenview Ave., Chicago, Ill.
INTERNATIONAL PRINTING INK CORP.,
THE, 636 11th Ave., New York, N. Y.
MINNESOTA MINING & MANUFACTUR-
ING COMPANY, Saint Paul, Minne-
sota.
SEIBOLD, J. H. & G. B., INC., 47 Watts
St., New York, N. Y.
SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

PLATE MAKING EQUIPMENT

LANSTON MONOTYPE MACHINE Co.,
24th at Locust St., Phila., Pa.
RUTHERFORD MACHINERY Co., Div.
General Printing Ink Corp., 100
Sixth Ave., New York, N. Y.

PLATE MAKING SERVICE

CHICAGO LITHO PLATE GRAINING Co.,
214 N. Clinton St., Chicago, Ill.
GRAPHIC ARTS CORP., 1104 Jackson
Ave., Toledo, O.
LITHOPLATE CO., 101 E. Clybourn St.,
Milwaukee, Wis.
OFFSET ENGRAVERS ASSOCIATES, INC.,
42 E. 20th St., New York, N. Y.
OFFSET PRINTING PLATE CO. OF NEW
YORK, INC., 100 Bleecker St., New
York, N. Y.
PHOTO-LITHO PLATE SERVICE Co., 113
St. Clair Ave., N. E. Cleveland, O.
RIGHTMIRE-BERG Co., 717 S. Wells
St., Chicago, Ill.
SWART-REICHEL, INC., 461 Eighth Ave.,
New York, N. Y.
STEVENSON PHOTO COLOR SEPARATION
Co., 222 W. Fourth St., Cincinnati, O.

PLATES—Aluminum, Zinc

INTERNATIONAL PRINTING INK CORP.,
THE, 636 11th Ave., New York, N. Y.
LITHOGRAPHIC PLATE GRAINING CO. OF
AMERICA, INC., 41 Box St., Brooklyn,
N. Y.
RELIABLE LITHOGRAPHIC PLATE CO.,
INC., 17 Vandewater St., New York,
N. Y.
SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

PLATES—Dry

EASTMAN KODAK CO., Rochester, N. Y.
GEVAERT CO. OF AMERICA, INC., THE,
423 W. 55th St., New York, N. Y.
HAMMER DRY PLATE & FILM CO., Ohio
Ave. & Miami St., St. Louis, Mo.
NORMAN-WILLETS CO., 318 W. Wash-
ington St., Chicago, Ill.

PRESSES—New

HARRIS-SEYBOLD-POTTER Co., 4510 E.
71st St., Cleveland, O.
RUTHERFORD MACHINERY Co., Div.
General Printing Ink Corp., 100
Sixth Ave., New York, N. Y.
STOESSEL MACHINE MFG. CO., 568
Broadway, New York, N. Y.
WEBENDORFER-WILLS Co., INC., Mount
Vernon, N. Y.

PRESS WASHERS AND ACCES- SORIES

GEGENHEIMER, WM., INC., 78 Roebling
St., Brooklyn, N. Y.

PROOF AND TEST PRESSES

RUTHERFORD MACHINERY Co., Div.
General Printing Ink Corp., 100
Sixth Ave., New York, N. Y.

PROOF PRESSES—Automatic

KRAUSE, KARL, U. S. CORPORATION,
55 Vandam St., New York, N. Y.

PUMPS—Vacuum and Air

GAST MFG. CORPORATION, 57 Mathieu
Ave., Bridgman, Mich.
LEIMAN BROS., 23 Walker St., New
York, N. Y., and 110 Christie St.,
Newark, N. J.

QUARTZ GRAINING SAND

SENEFELDER COMPANY, INC., THE, 32-
34 Greene St., New York, N. Y.

ROLLERS

BINGHAM BROS. Co., INC., 406 Pearl
St., New York, N. Y.
BINGHAM'S, SAM'L, SON MFG. Co.,
Chicago, Ill.
CHICAGO ROLLER Co., INC., 554 W.
Harrison St., Chicago, Ill.
DAYCO DIVISION, Dayton Rubber Mfg.
Co., Dayton, O.
GODFREY ROLLER COMPANY, 211 N.
Camac St., Phila., Pa.
IDEAL ROLLER & MFG. Co., INC., 2512
W. 24th St., Chicago, Ill., and 21-
24 Thirty-ninth Ave., Long Island
City, N. Y.
RAPID ROLLER Co., Federal at 26th,
Chicago, Ill.
ROBERTS & PORTER, INC., 100 Lafa-
yette St., New York, N. Y., and 402
S. Market St., Chicago, Ill.
SIEBOLD, J. H. & G. B., INC., 47 Watts
St., New York, N. Y.
VULCAN PROOFING Co., 58th St. &
First Ave., Brooklyn, N. Y.

SCREENS—Half-tone

PITMAN, HAROLD M., Co., 150 Bay
St., Jersey City, N. J., and 51st
Ave. and 33rd St., Chicago, Ill.
REPRO-ART MACHINERY Co., Wayne
Ave. & Berkeley St., Phila., Pa.

SULLEBARGER, E. T., Co., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.

SHADING MACHINES AND MEDIUMS

DAY, BEN, INC., 118 E. 28th St., New York, N. Y.

SILVER BATHS

DOUTHITT CORP., THE, 650 W. Baltimore Ave., Detroit, Mich.

SODIUM SULPHITE ANHYDROUS PHOTO

HUNT, PHILIP A., COMPANY, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, O.—1076 W. Division St., Chicago, Ill.—111 Binney St., Cambridge, Mass.

MALLINCKRODT CHEMICAL WORKS, 3600 N. Second St., St. Louis, Mo., and 72-74 Gold St., New York, N. Y. NORMAN-WILLETS CO., 318 W. Washington St., Chicago, Ill.

SPRAY GUNS

SPRAYOMATIC PRODUCTS CO., 1120 Harrison St., Cincinnati, O.

SULPHUR

MALLINCKRODT CHEMICAL WORKS, 3600 N. Second St., St. Louis, Mo., and 72-74 Gold St., New York, N. Y. PITMAN, HAROLD M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

SINCLAIR & CARROLL CO., INC., 591 11th Ave., New York, N. Y.

TAPE—Black Gummed

METZGER, ALFRED E., 30 Irving Place, New York, N. Y.

TAX CONSULTANTS

KROMBERG, J., & ASSOCIATES, C.P.A.'s, 461 Eighth Ave., New York, N. Y.

TRADE LITHOGRAPHERS

HINSON & McAULIFFE CORP., 203 E. 12th St., New York, N. Y.

TRANSFER PAPER

INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.

SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.

SIEBOLD, J. H. & G. B., INC., 47 Watts St., New York, N. Y.

SINCLAIR & VALENTINE CO., 11 St. Clair Pl., New York, N. Y.

TRANSFER PROOFS—TYPE IMPRESSIONS

NEW YORK TYPE TRANSFER SERVICE, 237 Lafayette St., New York, N. Y.

TUSCHE

INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y. KORN, WM., INC., 260 West St., New York, N. Y.

SENEFELDER COMPANY, INC., THE, 32-34 Greene St., New York, N. Y.

TYPEWRITER COMPOSITION

GALLANT SERVICE, INC., 81 W. Van Buren St., Chicago, Ill.

TYPEWRITERS

INTERNATIONAL ELECTRIC WRITING MACHINES DIVISION OF INTERNATIONAL BUSINESS MACHINES CORPORATION, 590 Madison Ave., New York, N. Y.

VACUUM AND PRINTING FRAMES

DOUTHITT CORP., THE, 650 W. Baltimore Ave., Detroit, Mich.

LANSTON MONOTYPE MACHINE CO., 24th at Locust, Phila., Pa.

RUTHERFORD MACHINERY CO., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

SULLEBARGER, E. T., Co., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.

SWEIGARD-IDEAL CO., 6122 N. 21st St., Phila., Pa.

VARNISH

AULT & WIBORG CORP., 75 Varick St., New York, N. Y.

CARTER, C. W. H., 100 Varick St., New York, N. Y.

HILO VARNISH CORP., 42-60 Stewart Ave., Brooklyn, N. Y.

SIEBOLD, J. H. & G. B., INC., 47 Watts St., New York, N. Y.

SINCLAIR & CARROLL CO., 591 11th Ave., New York, N. Y.

SINCLAIR & VALENTINE CO., 11 St. Clair Pl., New York, N. Y.

VARNISHES—Overprint

CARTER, C. W. H., 100 Varick St., New York, N. Y.

GAETJENS, BERGER & WIRTH, INC., 35 York St., Brooklyn, N. Y., and 538 S. Clark St., Chicago, Ill.

HILO VARNISH CORP., 42-60 Stewart Ave., Brooklyn, N. Y.

INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.

SINCLAIR & CARROLL CO., INC., 591 11th Ave., New York, N. Y.

SINCLAIR & VALENTINE CO., 11 St. Clair Pl., New York, N. Y.

WASH-UP EQUIPMENT

INTERNATIONAL PRESS CLEANER & MFG. CO., THE, 112 E. Hamilton Ave., Cleveland, O.

WATER FOUNTAIN ETCH

INTERNATIONAL PRINTING INK CORP., THE, 636 11th Ave., New York, N. Y.

WET PLATE MATERIALS

Negative Collodion

Stripping Collodion

Rubber Stripping Solution

HUNT, PHILIP A., Co., 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, O.—1076 W. Division St., Chicago, Ill.—111 Binney St., Cambridge, Mass.

MALLINCKRODT CHEMICAL WORKS, 3600 N. Second St., St. Louis, Mo., and 72-74 Gold St., New York, N. Y. NORMAN-WILLETS CO., 318 W. Washington St., Chicago, Ill.

WHIRLERS

DOUTHITT CORP., THE, 650 W. Baltimore Ave., Dertoit, Mich.

LANSTON MONOTYPE MACHINE CO., 24th St. at Locust St., Phila., Pa.

RUTHERFORD MACHINERY CO., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

W. P. Miller
55 RAMSEY AVENUE,
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PEN DRAWING
ENGRAVING
RETOUCHING
NEGATIVES

TINTS AND BORDERS FOR COUPONS, CHECKS, CERTIFICATES.

Milwaukee Bronzers

for all presses. Also some rebuilt units.

Write

C. B. Henschel Mfg. Co.

Milwaukee, Wisc.

Host to Printing Women

Rutherford Machinery Co., division of General Printing Ink Corp., New York, was host to the Club of Printing Women headed by Biruta Sesnan last month at its display rooms, where a demonstration of the lithographic process from the original copy to the finished plate was given. The uses of the whirler, vacuum frame, photo-composing machine and photo-lettering machine were all described. Arthur Hermann, assistant manager of Rutherford, explained the steps of the process.

Hold Joint Dinner Meeting

The Packaging Machinery Manufacturers Institute and Production Managers Association held a joint dinner meeting at the Hotel Astor March 7. The dinner was held on the opening day of the Packaging Exposition and Conference. G. Prescott Fuller, Dexter Folder Co., Pearl River, N. Y., was a member of the committee in charge of arrangements.

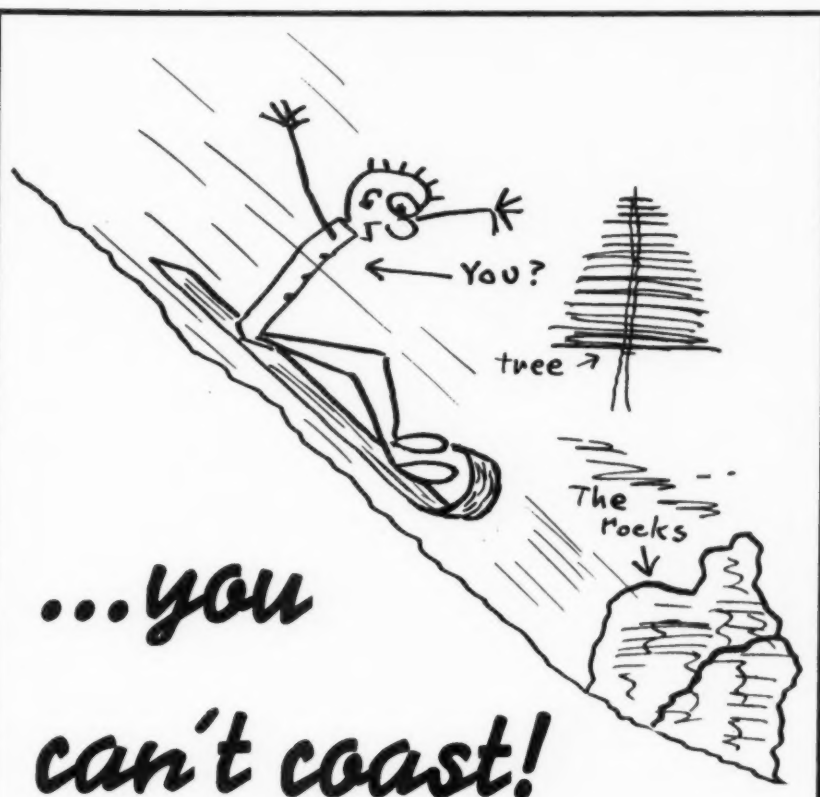
Northwestern Motors

Northwestern Electric Co., Chicago, is distributing literature describing its variable speed, single-phase motors for printing machinery. The literature is complete with photographs, specifications and the latest prices of the company's line of motors. Copies available on request.

New Color Guide

Color Prophet Sales Co., Chicago, has recently published "The Color Prophet," a color guide designed to enable the lithographer and printer to see what the colors in a printed job will look like beforehand. The book contains over 700 pages, showing a large number of individual illustrated color combinations, and over 12,000 color variations and their effects. Actual examples of half-tones, solids, Ben Days and the results of overprinting with solids and screens are shown. Space has been provided on every fourth page for notes.

MARCH 1939



NOT in business — you can't! If you let up on your advertising and selling efforts, sooner or later you hit the rocks. This is the unanimous verdict of Old Man Experience. Buyers forget much easier than they remember.

You can keep your products before the industries you want to sell most effectively and at lowest cost by the judicious use of advertising space in representative trade papers — papers which go *directly* to the men *who buy* your goods.

As far as the lithographic field is concerned — buyers will not get a chance to forget your products if you advertise regularly in

THE PHOTO-LITHOGRAPHER

254 WEST 31st STREET

NEW YORK

Advertisers' Index

MARCH, 1939

Agfa Anseo Corp. 3rd Cover	Korn, William, Inc. 58
American Graded Sand Co. 34	Krause, Karl, U. S. Corp. 56
Artists Supply Co. 54	
Baum, Russell Ernest. 52	Leiman Bros., Inc. 58
Bell Litho Plate	Litho Chemical & Supply Co. . 32
Graining Co. 58	Lithographic Plate Graining Co.
Bingham's, Sam'l, Sons	of America, Inc. 34
Mfg. Co. 12	
California Ink Co., Inc. —	Mallinckrodt Chemical Works
Carter, C. W. H. —	Merck & Co., Inc. —
Central Chemical Co. 58	Metzger, Alfred E. —
Chillicothe Paper Co. 42	Mille, W. P. 64
Classified Advertising. 59	
Coxhead, Ralph C., Corp. —	National Carbon Company, Inc. 38
Crescent Ink & Color Co. of	Norman-Willets Co. 46
Penna. 44	
Croke, Allan B., Co. 40	Okie, F. G., Inc. —
Day, Ben, Inc. 52	Pease, C. F., Co. 36
Dexter Folder Co. —	Phillips & Jacobs. 50
Driscoll, Martin, Co. 54	Pitman, Harold M., Co. —
Eastman Kodak Co. 31	Rapid Roller Co. —
	Reliable Lithographic Plate Co.,
Fuchs & Lang Mfg. Co., Div.	Inc. 46
General Ptg. Ink Corp. Bet. 10-11	Repro-Art Machinery Co. —
	Roberts & Porter, Inc. 38
Gaetjens, Berger & Wirth, Inc. 36	Rutherford Machinery Co.,
Godfrey Roller Company. —	Div. General Printing
Goerz, C. P., American	Ink Corp. 6
Optical Co. 44	
Grady & Neary Ink Co. 50	Senefelder Co., Inc. 4
Graphic Arts Corp. —	Senelith Ink Co., Inc. 2nd Cover
	Siebold, J. H. & G. B., Inc. ... 42
Haloid Co. —	Sinclair & Carroll Co. 40
Hammermill Paper Co. 3	Sinclair & Valentine Co. 7
Harris-Seybold-Potter Co. 4th Cover	Southworth Machine Co. 58
Henschel, C. B., Mfg. Co. 64	Stoessel Machine Mfg. Co. —
Hilo Varnish Corp. 56	Strathmore Paper Co. 11
Hinson, McAuliffe Corp. 54	Swart-Reichel, Inc. 56
Hunt, Philip A., Co. 44	
	Union Carbide and
Ideal Roller & Mfg. Co. 9	Carbon Corp. 38
International Press Cleaner &	
Mfg. Co. 52	Vulcan Proofing Co. 48
International Printing Ink	
Corp. 48	Webendorfer-Wills Co., Inc. ... 58
	"Where-To-Buy-It" 61-64
Johnston Paper Co. 58	
	Zeese-Brandt Ink Corp. 56
	Zeiss, Carl 52

(The Advertisers' Index has been carefully checked but no responsibility can be assumed for any omission)

Phila. Litho Club Hears Reed

The Litho Club of Philadelphia held its first educational meeting of the new year on Feb. 27 at the Poor Richard Club. Robert F. Reed, of the Dept. of Lithographic Research, University of Cincinnati, Cincinnati, O., talked on "Lithographic Chemistry," and the part science has played and will play in the lithographing industry.

Forbes Pimentos Folder

Forbes Lithograph Manufacturing Co., Boston, has just lithographed a folder for Pomona Products Co., Griffin, Ga., illustrating Sunshine Pimentos. The pimentos, and illustrations of food used in combination with pimentos, are in natural colors. The folders were designed for home economics teachers, students, jobbers, retailers, clerks and consumers, and are punched to fit ring binders.

"Yesterday's Types Today"

Westvaco Inspirations for Printers, No. 115, published by West Virginia Pulp and Paper Co., is an "old type" number. ". . . the revival of old type is here," the copy reads. "The old faces—not so 'mid-Victorian' after all—are coming into belated fame and fortune. Old faces revived, or 'lifted' are creating impressions—conveying nuances—adding strength to the power of the words they form. And behold! The great flexibility of printing is proved again—conforming to the needs of an age and the requirements of commerce—continuing to hold its power-to-do—to convince, demonstrate, provoke, plead, promise and SELL."

The book is in the customary "Inspiration" manner, generously illustrated, showing the adaptability of the "old type" faces to today's merchandising needs.

Name John H. Masterson

John H. Masterson has been named special assistant to the general manager of George H. Morrill Co., a division of General Printing Ink Corp., New York.

THE PHOTO-LITHOGRAPHER

**FOR BEST RESULTS
USE BEST MATERIALS**

**It's so dependable for camera and
contact frame exposures.**

REPROLITH

THIN-BASE



Offers these features:

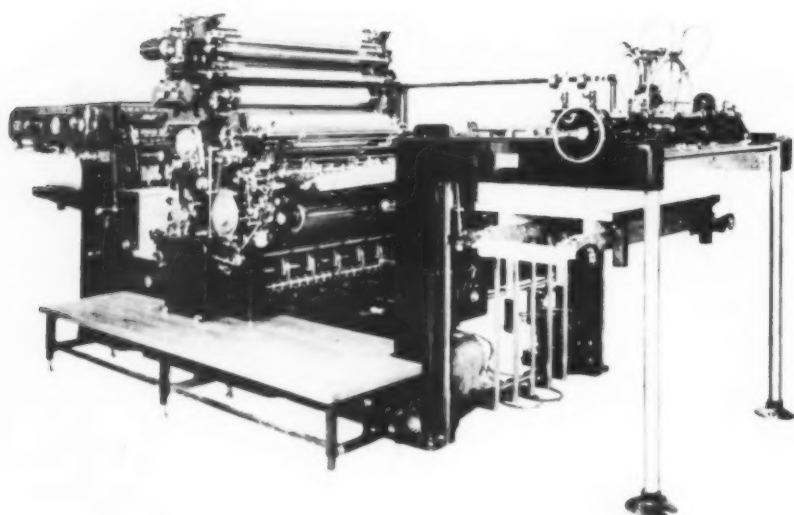
- 1. EXTRA THIN SAFETY-BASE (.004" THICK)**
- 2. MAXIMUM CONTRAST**
- 3. GREATEST RESOLVING POWER**
- 4. EXTRA LATITUDE IN DEVELOPMENT**
- 5. ANTI-HALATION COATING**
- 6. SAFETY BASE**
- 7. RELIABLE UNIFORMITY**

**MADE BY
AGFA ANSCO CORPORATION
IN BINGHAMTON, NEW YORK**



Singled Out

for its Modern Advantages



Distinguished

BY ITS ABILITY TO
PRODUCE WHAT TODAY'S
OFFSET DEMANDS . . .

★ **HARRIS** . . . *the Offset Press*

LITHO-CHEMICALS

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

★ **OFFSET IS THE MODERN METHOD**

designed and constructed to carry out the Pressman's skill, is, and will continue to be, the choice of those who know quality Offset. Modern Lithography can always reflect pressroom skill when produced on the high speed, precision built Harris Offset Press.

Eight sizes completely cover the requirements of the Photo Lithographic field.

HARRIS-SEYBOLD-POTTER-COMPANY

PIONEER MAKERS OF SUCCESSFUL OFFSET PRESSES

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